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ABSTRACT

Ninety producers from school radio departments representing 17 European countries and two international organizations met in a conference to share, examine, and evaluate work experiences. Sample progress reports from 41 departments in 21 countries are presented, describing such areas as staff, target groups, subjects, cooperation with schools, and research. Twelve professional papers are presented which deal with studies and perceptions of the situation of school radio, issues related to the reception of radio broadcasts, and uses of radio with foreign language and music education. A closing address discusses the future of school radio. Appendices include a questionnaire used in preparation for the conference, the conference program, a list of participants, and a list of programs presented. (CMV)

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School Radio in Europe

A documentation with contributions given at the European School Radio Conference, Munich 1977

Edited by
Internationales Zentralinstitut für
das Jugend- und Bildungsfernsehen

U S DEPARTMENT OF HEALTH.
EDUCATION & WELFARE
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EDUCATION

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

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Hertha Sturm

Introductory Remarks: School radio and research

One thing is certain: school radio always involves some form of scientific knowledge. No matter whether it is a history or natural science broadcast, whether the aim is to teach music or a foreign language, I think you will agree that there is a piece of "transposed scientific knowledge" in each and every school broadcast.

Moreover, school radio caters for clearly defined target groups: its broadcasts are intended for specific school-types and age-groups. This means, however, that those responsible for school radio programmes must have expert knowledge, at least with regard to the powers of comprehension of the intended recipients.

Lastly, today school radio must be seen as part of a multi-media system. If we take out radio and television alone as parts of this system, in most cases it very soon becomes evident when concrete programme planning is going on, that we have only a very vague idea of which medium is best suited to which theme, or recipients, or teaching aims. Just to mention one point: I think we can safely claim that the media of radio and television differ greatly if we consider the problems of perception, attention, comprehension or the mediation of imagination. This means, however, that if the concept of "multi-media system" is to be more than just a catch-word or an empty denomination, we must ascertain the specific performance potential of the various media in each individual case.

This last sentence also explains why the Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen cannot simply ignore issues involving radio. The IZI is concerned with recipient-oriented research into the effects of the media from a psychological point of view. In addition, we endeavour to make research findings – our own as well as those arrived at elsewhere – understandable for media practitioners, to introduce them into media practice through seminars, counselling activities, and the publication of "Fernsehen und Bildung" (Television and Education), a review for media psychology and media practice. Lastly, we provide the media practitioners with documentary material, bibliographies and surveys, in order to help make the increasingly complex background to their professional tasks a little clearer. With this type of work it is inevitable that we at the IZI should come up against questions concerning radio, in particular those concerning educational radio for specific age-groups.

The three sections of the IZI worked together to prepare and follow up this conference, whose initiator is Paul Löhr. This is one side of the picture. The other, probably more important side of the picture is the following: the school radio conference in 1977 enabled the school radio producer to share, examine and

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evaluate the manifold experiences, disappointments and corroborations he had had directly on the job, in the light of his colleagues' experiences and ideas. But this takes us into the "forefield of science", for, after all science – empirical science – is basically nothing but the summarized demonstration of reality, of experience, with respect to specific questions and issues. The fact that school radio always deals with clearly definable problemes, too – irrespective of whether it is a question of the material to be presented, the specific audience to be catered for, or media-specific modes of presentation – already infers from the very beginning a connection between school radio and science. And "recipient-oriented broadcasts" and "science" have something else in common, too: the testing of experience leads to the emergence of new, future-oriented issues and tasks.

Admittedly – because of the very precision demanded of science and school radio practice, it was not possible at this conference to consider the overall achievements of school radio. (I should imagine that the old saying still holds true today that school radio, through the sheer abundance of the themes it presents, is like a "little radio station of its own".) We therefore had to limit ourselves. With reference to our "European school radio survey", we confined ourselves as far as practical themes were concerned to "the teaching of foreign languages" and "music"; the scientific themes were limited to "perception and attention", as well as "problems of feedback".

The theme of "perception and attention" in particular appears to be of central importance, for – if a media presentation is to be effective, its recipients must be capable of a certain level of performance regarding attention and perception. On this topic scientific research has quite a lot to say. Teachers' and pupils' assessments of school radio broadcasts, too, probably depend on perception and attention (this can then find expression in the feed-back data).

Last but not least, we should not forget that school radio – more directly than any other radio sector – caters for a very critical audience: its pupils are not only school radio listeners, they also compare it with the presentations of other media which are available, whilst teachers possess a highly developed critical judgment with respect to the material treated as well as the didactic method of presentations and the level of understanding of their pupils. I know what I am talking about – I was a member of the school radio staff for many years. Science and research can and should be of assistance to school radio in many ways.

Paul Löhr

In place of a foreword: Preliminary reflections and impressions

Rome 1961, Tokio 1964, Paris 1967, Belgrade 1974, Ottawa 1976: all these international conferences, initiated and supported by the EBU, were milestones in the development of the world-wide exchange of information concerning the educational application of radio and television. A definite feature in this development in the 1960's was that the majority of attention was paid to the potentialities of TV in the teaching-learning process, indeed it was even regarded as a universal educational medium. A return to the function of radio in the widened range of available media, that is, to the importance of educational radio, began with the Belgrade conference. Here an attempt was made to forecast what developments for radio would emerge in the 1980's. It may also be noted that a working-group of the Ottawa conference tackled the subject: "What is the role of educational radio?", in which the future role of school radio was included.

The growing involvement of the IZI (Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen) in the subject of school broadcasting was a result of two surveys on audience ratings and programme use which we carried out in 1972/73 for the school television department[1] and in 1974/75 for the school radio department of Bayerischer Rundfunk[2]. We became interested in the idea of holding a specialized conference when we realized that up to that time there had never been a systematically prepared international exchange of information for the heads and editors of the European school radio departments. The IZI already possessed enough experience in working out programmes and organizing international conferences devoted to individual aspects of educational television.

An exchange of information at a national or international level had been found to be of use only when the information offered was on a comparable basis and when the subjects discussed were of general importance. Our first task was therefore to examine whether or not the European school radio scene is, despite its great variety, uniform enough to make it the topic of a conference, at least with regard to the selection and formulation of subjects to be discussed.

In deciding whether or not to summon a European school radio conference, one factor of our decision was the amount of interest shown by the European radio departments to which we had sent a questionnaire on this subject in May 1976 (see appendix). The answers we received from the various departments included the following points:

- With one exception all those asked to complete the questionnaire considered themselves badly informed about the school radio programmes of their Euro-

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pean colleagues. At the same time they expressed the desire for more information concerning the school radio situation in other countries, equal importance being attached to an exchange of information with both West and East European countries.

- Almost all departments asked to complete the questionnaire were prepared to supply information concerning their own programme and to present and discuss selected examples of programmes at the planned school radio conference. The proposed programmes ranged from an introduction to the understanding of the Bible to a cybernetics course, from programmes for primary schools to programmes for the final years of high school.
- The difficulties facing those responsible for the planning, production, and broadcasting of school radio programmes are nearly always problems of finance, of cooperation with school administrations and of obtaining feedback from schools on the success of programmes. Sometimes complaints were made about the lack of good authors and the difficulty of working together with publishing houses (supplementary material).
- In answer to the question of whether they were interested in psychological and socio-psychological problems and in their importance for the users of school radio programmes, most marked the following subject areas in the questionnaires: development of understanding, attention and perception.

We had written to 30 broadcasting organizations in 23 European countries, receiving answers, after some reminders, from 22 in 14 countries.

Taking into account the nature of these replies we concentrated our conference planning on two fields: one was an information unit provided by and for school radio practitioners; the second field was the presentation of new findings from media research and linguistics that would be of interest for school radio practice. For the section devoted to school radio practice, the main points of emphasis evolved as "The subject 'music education' in school radio" and "Foreign language learning by school radio", while some of the work of the IZI Research Department on "perception and attention" and, in addition to this, on the group of questions concerning "School radio and feedback" were to be lectured on and discussed.

In our efforts to create a kind of "conference dramaturgy", we aimed at a rather ambitious opening subject. We had first planned to give a survey of school radio in Europe, dealing with its concepts, working methods and trends. Soon, however, we had to recognize that such a broad spectrum could hardly be summarized in one lecture or that competent, well-informed experts on all areas of European school radio were hard to find. For this reason we chose the form of a panel discussion as best suited to dealing with this subject, trying, by our choice of panel-members, to do justice to the various facets of European school radio, – the different regional, structural and political considerations affecting radio. To ensure that participants were all equally well informed, documentary material on "School radio in European countries – reports from European school radio departments" was prepared as one of the written conference documents. We would like to thank the school radio editors concerned for their willingness to cooperate in doing this and for revising their reports again after the conference was over. Two further conference documents, in addition to essays dealing with the problem of perception and attention, were drawn up by the IZI Documentation Department and made available to all interested, namely selected bibliographies on "Music in Radio and Television" and "Foreign Language Learning by School Radio" (since revised and expanded).

Conference preparations were assisted by close contact with the head of school radio in the Bayerischer Rundfunk, *Dr. Rudolf Riedler*, and his colleagues, and with the then chairman of the Conference of Heads of School Broadcasting of the ARD, *Dr. Klaus Klöckner*, of the Hessischer Rundfunk, for whose encouragement and expert advice we are greatly indebted. Our thanks are also due to *Henri Dieuzeide*, the Director of the Division of Methods, Materials and Techniques, UNESCO, and to colleagues in the EBU, Permanent Services, Geneva.

As planned from the beginning, we sent invitations to come to Munich through the heads of the radio departments of the European broadcasting organizations to the heads of school radio departments and to editors responsible for music and foreign languages. Since most of them accepted our invitation, the limits of space available to us were soon reached. We were sorry to have to turn down the wish expressed by Yougoslav Radio to send 20 participants and the numerous applications to attend from other bodies also interested in school radio.

Breakdowns in organization, of varying importance, at least have the merit of preventing a conference from becoming boring. For some the conference programme was certainly too concentrated, that is, there was not enough time for exchange of ideas and discussion. For others the programme was perhaps too varied, too much was lumped together. The presentation of the selected programme examples for foreign language learning turned out to be too long – it went on until even the coffee buffet was closed. But this did little to change the readiness of the participants to work, or to alter their sense of commitment or indeed their personal friendliness, which determined the spirit of the conference throughout.

Why we are reproducing here only extracts from the lecture "Results of audience surveys carried through in various European countries – a comparison", given by *Dr. Tamás Szecskö*, Director of the Mass Communication Research Centre, Budapest, and former chairman of the Group of European Audience Researchers, is also a conference "hitch". The hitch was that the first draft of the lecture and the source material, assembled with such trouble, were lost during a flight. For this reason the lecture could not be given as planned. Moreover, Szecskö himself was of the opinion that "the variety of individual details in the data assembled and in the methods of research would not permit a comparison even of one of the most basic data, that is, the scale of use made of the programmes." He was sceptical about the data given on the use of school radio programmes in general mentioning in this connection the statement received from Hungary, where "35% of the primary schools in Hungary made more or less common use of school radio programmes, whereas 27% of schools employed them at least once a month. For school television the 'less exact' percentage was 76%, the 'more exact' 66%." He then continued: "I know from information supplied by heads of schools that 62% of the primary schools in Hungary used school radio programmes in their lessons in 1973, whereas according to the pessimistic estimates made by school radio programme producers only 16% should have."

What did the conference achieve, from the point of view of the IZI? We regard the present publication as a contribution to the discussion and further development of European school radio that thanks to supplementary material and commentaries goes beyond what was offered by the conference. Concrete follow-up activities are a seminar series on "Composed Music for Adolescents" undertaken by the 'Zentralstelle Fortbildung Programm ARD/ZDF' (Central Further Education Programme Dept. of the ARD/ZDF) in Frankfurt, as well as the fact that the subject 'perception and attention', initiated by the Research Department of the IZI, will be dealt with during the 16th Seminar of the EBU 1978 at Basle. *Henri Dieuzeide* provides a detailed commentary on international school radio developments in the final report.

Like any other undertaking the success of a specialized conference depends on the people taking part in it, whether on the platform, in working-groups or in the organization. What the experts have achieved can be read afterwards. What the planning and organization team performed, can be seen, among other things, from the activities of the IZI staff – *Marianne Grewe-Partsch, Rosemarie Hagemeister, Käthe Nowacek, Hertha Sturm, Christina Undritz* – and especially from the work of my colleague *Manfred Meyer*. Their expert knowledge and personal initiative were an important factor in the success of the conference. My thanks are due to them and finally to all concerned.

References

[1] *Schmidbauer, Michael; Löhr, Paul; Schorb, Alfons Otto:* Schulfernsehen in Bayern. München: Ehrenwirth 1974. 98 pages.

[2] *Schmidbauer, Michael; Löhr, Paul; Riedler, Rudolf:* Unterrichtstechnologie in der Praxis. Der Schulfunk. München: Ehrenwirth 1976. 82 pages.

School radio in European countries:
Reports from European school radio departments

The following questions, which are repeated in the reports in a shortened form, were posed to the broadcasting organizations.

1. When did your organization begin school broadcasts in your country?
   (Beginning of school radio broadcasts)
2. What broadcasting times have been made available to you?
   (Broadcasting times)
3. How large is your staff? How many of them are editors/producers?
   (Staff)
4. Which target groups are you trying to reach?
   (Target groups)
5. Which subjects from the school curriculum do you consider in your programme, and what do you offer that is not covered by the curriculum?
   (Subjects)
6. Do school radio and school television work together at your station, and, if so, which areas are covered by this cooperation?
   (Cooperation between school radio and school television)
7. How is the cooperation between the school radio department and the schools in your country organized?
   (Cooperation with schools)
8. How is the cooperation between the school radio department and your country's Ministry of Education organized?
   (Cooperation with educational authorities)
9. How are the recording rights and subsequent uses of the programme arranged in your country?
   (Recording rights)
10. Are studies regularly or occasionally carried out on your programme?
    (Research)

Austria

Österreichischer Rundfunk (ORF)

Argentinierstraße 30a
A-1041 Wien
Tel.: 6 59 51
Telex: 01-1 790

1. Beginning of school radio broadcasts

The ORF's school radio broadcasts began on 8th January, 1932.

2. Broadcasting times

Mondays to Fridays 9.05– 9.30 hrs Austria 1 and Austria Regional
10.05–11.00 hrs Austria 1
16.05–16.30 hrs Austria 1

This results in a daily broadcasting time of one hour 45 minutes and a weekly time of 8 hours 45 minutes.

3. Staff

ORF school radio has a staff of eight, including the departmental head, three programme producers and four employees.

4. Target groups

The target groups are schoolchildren, teachers and parents, but to an increasing degree also 'outsiders' such as housewives, shift workers and old age pensioners. The function of school radio as a popular educator is not to be underestimated.

5. Subjects

a) In the school year 1977/78 the following subjects from the curriculum will be taken into consideration: general knowledge, German, literature, biology and study of the environment, history and social studies, geography and economics, musical education, physics, chemistry, mathematics, philosophy, religion (Protestant and Catholic), knowledge of the media and media education, Latin, English, French, Italian, Russian. The subject "Political Education" will also be dealt with. Then there are individual broadcasts to mark the National Holiday, Human Rights Day, Europe Day, World Savings Day, etc.

b) The following programmes will be offered outside the curriculum: preschool education, further training for teachers, parents' education, a magazine by and for pupils, a series on the history of postage stamps, etc.

6. Cooperation between school radio and school television

The only cooperation with school television is the publication of a joint programme journal "The Austrian School Radio with Telemirror".

7. Cooperation with schools

Every Austrian regional studio (nine altogether) cooperates with the regional schools through the so-called Regional School Radio Officer, who, as a rule, is a teacher and establishes the contacts between the schools, the regional school authorities and the regional studio.

8. Cooperation with the educational authorities

Cooperation with the Federal Ministry of Education and Arts is intense and relatively unproblematical. The Ministry influences the programme production through the School Instruction Law. According to this law, instructional media must "correspond in content and form to the curriculum of the school level concerned, and must be suitable for the pupils of the level concerned and appropriate in material, presentation and in any other aspect". Moreover, the Minister of Education must, before giving his approval, obtain an expert opinion from one of the advisers responsible for the broadcast to ascertain to what extent these conditions have been met. In this way each individual broadcast undergoes a quality control by an adviser of the Ministry of Education.

9. Recording rights

Recording ORF's broadcasts for private purposes is not allowed. For school use the "Bundesstaatliche Hauptstelle für Lichtbild und Bildungsfilm" (Federal Centre for Pictures and Educational Films) – an office of the Ministry of Education – copies all broadcasts and makes them available to the schools. They have only to pay for the tapes (cassettes).

10. Research

Regular studies on the whole radio and television programme are carried out as part of the media analysis commissioned by the ORF. Individual studies on school radio are made as internal papers at teachers' training colleges, as seminar papers and dissertations at universities. On request the students are advised by school radio. In the near future the Federal Ministry of Education and Arts plans to carry out an investigation on the implementation of school radio in all schools in Austria.

Belgium

Belgische Radio en Televisie (BRT)

Omroepcentrum
Ang. Reyerslaan 52
B-1040 Brussel
Tel.: 7 36 10 10
Telex: 21 479

1. Beginning of school radio broadcasts

Since the beginning of school radio in December 1931 there have been school broadcasts without interruption, with the exception of the war years (from May 1940 to November 1946).

2. *Broadcasting times*

Primary schools: $3^1/_2$ hours a week for 24 weeks a year, only on MF (AM)
Secondary schools; 6 hours 15 minutes a week for 24 weeks a year, only on VHF (FM).

The total broadcasting time in the week amounts to 9 hours 45 minutes for 24 weeks a year (from mid-September to the end of May; at Christmas and Easter there are four-week breaks). School broadcasts are not repeated.

3. *Staff*

Since 1961 school radio and school television have been joined together into one department. The whole staff is therefore concerned with both sound radio and television. It consists of one production manager, two head producers (one for television, one for radio), eight producers, four directors, six assistants and seven other cooperators.

4. *Target groups*

The target groups are the following (kinds of schools):

Primary schools:	1st and 2nd forms (6–7 year-olds)
	3rd form (8-year-olds)
	4th form (9-year-olds)
	5th and 6th forms (10–11 year-olds)
Secondary schools:	lower level (12–15 year-olds)
	upper level (15–18 year-olds)

5. *Subjects*

a) The following subjects in the curriculum are dealt with: mother tongue (Dutch); foreign languages: French, English, German; history; ancient history (classical culture); biology; geography; religion; ethics.
b) Broadcasts on the following extra-curricular subjects are also produced: on current events; music; career counselling.

6 *Cooperation between school radio and school television*

At the BRT school radio and school television have been joined together into one department since 1961. Both media are regarded as complementary. For each subject the more suitable medium is chosen. Whatever has to be presented in an experiment or must be visible belongs to television. On the other hand, sound radio deals with topical events, music, literature, history and everything that can be presented in the form of a radio play. There are also multi-media projects in the areas of biology, geography and foreign languages.

7. *Cooperation with schools*

The broadcasting station is responsible for the contents and financing of school radio broadcasts. It is advised by a committee in which all branches of the schools are represented, and by specialized working groups in which teachers and producers are represented.

8. *Cooperation with educational authorities*

Originally (from 1931 to 1940) school radio was an initiative of the Ministry of Education, and was put into practice using the technical aid of the broadcasting station.

After 1946 school radio became a service of the broadcasting station and the broadcasting station bears full responsibility. One member of the Ministry of Education has a seat on the School Radio Council.
Up to 1962 the Ministry was also responsible for the accompanying material, but since that time the responsibility for it is also borne by the broadcasting station.

9. *Recording rights*

By now almost all schools possess tape recorders, which are used by most of them to record school radio broadcasts. For the last three years the broadcasts have also been recorded by the audiovisual service of the Ministry of Education, which supplies the schools with free copies on request. Up to now there are no legal regulations in Belgium which lay down the recording rights at schools for school broadcasts. However, all those concerned agree that authors and producers can insist on certain rights; so far recordings have been allowed without any further formalities as long as the recordings are used only in the school.

10. *Research*

In our school radio magazines there are assessment sheets which are voluntarily filled in and sent back by the teachers. In this way we receive opinions relating to certain broadcasts. Quantitative studies are carried out regularly once a year to determine the use made of the programmes at the schools or to find out about the equipment the schools have at their disposal. Qualitative surveys, on the other hand, are very rare. Students of education or communication sciences, however, have already published some studies on school radio.

Radiodiffusion-Télévision Belge (RTB)

Cité de la Radio-Télévision
Boulevard Auguste Reyers 52
B-1040 Bruxelles
Tel.: 7 35 90 60
Telex: 21 437

1. *Beginning of school radio broadcasts*

School radio at RTB has existed since 1935. But only since 1969 has it been attached to school television. Since then the responsible persons have endeavoured to achieve two aims:

1. To do justice to the specific nature of the individual medium,
2. To make up the programme in such a way that sound radio, radiovision and television complement one another.

2. *Broadcasting times*

In the years 1969/70 school radio was allocated one hour a week.
In the period 1977/78 school radio will transmit four programmes of 30 minutes each, one programme of 20 minutes and one programme of 10 minutes weekly, which means that the total broadcasting time is two hours thirty minutes a week.

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3. Staff

The school radio staff is made up of:

1. Permanent staff: one programme director
one editor ($^{3}/_{4}$ time)
2. Free-lance contributors: about 50 script writers, mostly active teachers, some of whom also work for school television.

4. Target groups

In the period 1977/78 school radio will transmit broadcasts for the following target groups:

1. For lessons in nursery schools (3–6 year-olds): 12 programmes.
2. For lessons in primary schools:
   - second level (8–9 year-olds): 24 programmes
   - third level (10–11 year-olds): 24 programmes.
3. For lessons in secondary schools (12–18 year-olds):
   - 8 broadcasts: French lessons
   - 8 broadcasts: music lessons
   - 8 radiovision programmes (geography and art)
   - 24 broadcasts: foreign language lessons (Dutch, English, German)
   - 24 broadcasts on current events.

5. Subjects

As in many Western European countries, the aim of RTB school radio is to supplement and enrich the teachers' lessons. This means that most of the school subjects figuring in the curriculum are supplemented by one or several radio broadcasts, as required. The main emphasis, however, is placed on the mother tongue (French) and on music, since sound radio is especially suitable for these subjects.

In the case of radiovision most of the broadcasts deal with the following subjects: geography, sciences, history and art.

However, a number of broadcasts also treat subjects which are not necessarily part of the curriculum, e. g. emotional life and sex education, behavioural research and, in particular, current events (one broadcast a week for primary schools, one a week for secondary schools).

6. Cooperation between school radio and school television

As school radio and school television are produced by the same department, it is natural that there should be close cooperation between the two media. Several subjects are dealt with jointly by radio and television, especially as far as the lessons for primary schools and instruction in modern languages are concerned.

7. Cooperation with schools

The programmes of school radio are made up by "pedagogical groups", in which producers and editors from the RTB, inspectors and teachers and, if need be, script writers are represented.

In addition, every class is invited to give its opinion on the broadcasts heard and to make suggestions on the content and form of future programmes. In this way there is a cooperation between school radio and its listeners.

8. Cooperation with educational authorities

The Belgian Ministry of Education purchases accompanying material and distributes it to the schools free of charge.

9. Recording rights

The school radio broadcasts are often recorded by the schools. Although RTB knows about this practice, it cannot give any official recording permission, since the question of the rights of further use has not yet been settled.

10. Research

Very few scientists have carried out studies on school radio. Occasionally, however, studies have been made on certain school radio broadcasts.
We received information about the use of school radio via reply-cards and other mail. In addition, the Ministry of Education compiles statistics on the use of school radio.

Cyprus

Ministry of Education
Educational Broadcasting
Service (Radio and TV)
Nicosia
Tel.: 40 25 06
Telex: –

Cyprus Broadcasting
Corporation
P. O. Box 4824
Nicosia
Tel.: 2 22 31
Telex: 2333

Educational broadcasting in its broadest sense is realized through the close cooperation between the Cyprus Broadcasting Corporation and the Ministry of Education. The Educational Broadcasting Service, which is part of the Ministry of Education, is responsible for the content and preparation of the programmes as well as their use and utilization in the schools. The Cyprus Broadcasting Corporation is responsible for producing and broadcasting the programmes.

1. Beginning of school radio broadcasts

Radio broadcasts to schools started during the school year 1968/69 with a series of programmes addressed to second grade pupils in primary schools.

2. Broadcasting times

So far we have had no problems with regard to the allocation of time required for broadcasting our programmes. Sometimes, difficulties arise concerning the time of the day at which the programmes need to be broadcast, however, we have overcome them.

3. Staff

On the Ministry of Education side we have two script writers for the radio programmes, apart from other staff members who deal with research, teachers' notes and publications, both for radio and television.

On the Cyprus Broadcasting side there is one producer, the necessary technical staff and facilities for the production of the programmes.

4. Target groups

Since our first transmissions in 1968 we have prepared programmes for all age groups in the primary school and programmes for the in-service training of teachers.

5. Subjects

The programmes deal with subject areas such as history, religion, music and rhythm and English as a foreign language. We have also prepared programmes dealing with modern mathematics and language for the in-service training of teachers.
We have not yet attempted to prepare programmes in subject areas that are not covered by the curriculum.

6. Cooperation between school radio and school television

The Educational Broadcasting Service is responsible for both school radio and school television.

7. Cooperation with schools

No statement

8. Cooperation with educational authorities

There is a very close cooperation between the Educational Broadcasting Service and the various departments of the Ministry of Education responsible for the different levels of education. Both, the selection of subject areas as well as the content of the programmes and their preparation is done through the cooperation of the Educational Broadcasting Service and the departments concerned. This cooperation is realized through various committees and other relevant consultation procedures.

9. Recording rights

There are no restrictions to our programmes being used by anybody. In fact, we run a service that transcribes programmes for the benefit of schools which are interested in securing them on reels or on cassettes.

10. Research

We always try to assess the impact of our programmes through questionnaires sent to teachers and by visits made to schools.

Denmark

Danmarks Radio (DR)

Islands Brygge 81
DK-2300 København S.
Tel.: (01) 54 61 61
Telex: 2695

1. Beginning of school radio broadcasts

The Danish school radio – organized and financed by Danmarks Radio – commenced broadcasting in August 1947. In the Thirties, school radio activities had been organized by the Ministry of Education but were suspended during World War II.

2. Broadcasting times

Today the following broadcasting times are available for school radio:

Tuesday	9.50–10.30 a. m.
Wednesday	9.30–10.30 a. m.
Thursday	9.30–10.30 a. m.

School radio programmes are transmitted only once, because all programmes are copied from the air by the national and regional AV centres and distributed as loans to the schools.

3. Staff

Educational broadcasting (both radio and television) is the responsibility of Radio Denmark's Education Department. One section caters for school broadcasting, another for adult education. The school section comprises 12 full-time and 6–7 free-lance producers, most of whom work with both radio and television.

4. Target groups

The target groups are primary schools (including kindergartens), secondary schools, as well as technical and commercial colleges.

5. Subjects

As regards the school curriculum, school radio provides broadcasts for the following subjects: Danish, religious knowledge, music, history, geography, biology, contemporary studies, and foreign languages (English, French, German, and Russian). In addition, programmes on psychology, philosophy, computer science, and other subjects have been broadcast.

6. Cooperation between school radio and school television

School radio and school television have been working together since 1965, mainly on Danish, mathematics, biology, physics, music, geography, history, and foreign languages. In these fields multi-media projects are very numerous, comprising radio and TV programmes as well as printed materials, slides, OHP slides, etc.

7. Cooperation with schools

Cooperation between school radio and the schools themselves is mediated by the National Institute for Educational Media and the regional centres for educational materials. The Education Department works in close cooperation with the Royal Danish School of Educational Science. Information to schools and teachers is an important field of activity. Once a year every teacher in Denmark will receive an illustrated pamphlet with descriptions of next year's output. And one month before the transmission of the programmes, the latest information about the series will be published in the pedagogical press.

8. Cooperation with educational authorities

Since April 1, 1976, educational broadcasting has been financed by the Ministry of Education, and programme plans are submitted for approval to the Minister of Education. Before approval, the plans – comprising proposals from the school broadcasting staff itself, from teachers, teachers' organizations, and other interested parties – are scrutinized in a number of committees set up jointly by the National Institute for Educational Media and Radio Denmark.

9. Recording rights

For many years school radio programmes have been copied by the AV centres or directly by the schools and used according to the needs in every single classroom. In the summer of 1977 an extension of the copyright act took place and made it legal for centres and schools to treat educational television programmes in the same way.

10. Research

The planning section of the Education Department assists in the developmental testing of new school programmes and supporting materials, and conducts surveys of teachers' and pupils' attitudes toward school broadcasts.

Federal Republic of Germany

The public-law broadcasting corporations in the Federal Republic of Germany

Broadcasting in the Federal Republic of Germany is conducted by public-law corporations. The broadcasting corporations are independent of the governments.

German broadcasting is organized on a federal basis and thus conforms to the constitution of the Federal Republic. There are independent broadcasting corporations in Baden-Baden, Berlin, Bremen, Frankfurt, Hamburg, Cologne, Munich, Saarbrücken and Stuttgart which broadcast sound radio and television programmes. The laws of the German federal states or state treaties between those states form the legal basis of these broadcasting corporations. Two further broadcasting corporations have been established by federal law which have their head offices in Cologne and which only broadcast sound programmes. They are "Deutschlandfunk" whose broadcasts are destined for the whole of Germany and for Europe, and the "Deutsche Welle" whose programmes are transmitted overseas. Both also operate information services in foreign languages.

All the broadcasting corporations with the exception of ZDF (Second German Television) are united in the ARD (Association of Public Law Broadcasting Corporations *of the Federal Republic of Germany). The Director-General of the executive corporation is in each case chairman of the ARD. RIAS Berlin, an American institution, is an advisory member of the ARD. The ARD is responsible for a number of joint institutions of the individual broadcasting corporations. It coordinates the joint German television programme – called the "First Programme" – which is composed of contributions of all individual broadcasting institutions of the German federal states. The second nationwide programme is broadcast by ZDF, Mainz, which is a joint foundation of all the federal states. ARD and ZDF cooperate in areas of common interest.*

Bayerischer Rundfunk (BR)

Rundfunkplatz 1
D-8000 München 2
Tel.: 59 00-1
Telex: 529 831 brmd

1. Beginning of school radio broadcasts

There has been an institution similar to school broadcasting in Bavaria since 1930: "Die Deutsche Stunde". The first school broadcast after the war was transmitted on 8th September, 1947, by "Radio Munich"; it had received the official permission of the US Military Government. Since 1949 the station has been called "Bayerischer Rundfunk".

2. Broadcasting times

School broadcasting has been allocated one hour every morning and afternoon from Monday to Friday, i. e. 10 hours a week. Each programme transmitted for the first time is repeated once within the same week.

3. Staff

The school broadcasting department comprises seven editors, two producers and the secretariat with a staff of five.

4. Target groups

There are school radio broadcasts for all types of schools and age groups; the main target group is the elementary and secondary modern school (Grund- und Hauptschule). The school radio programme is part of the general programme and as such is listened to by a large number of the general audience.

5. Subjects

a) Bayerischer Rundfunk is the only broadcasting station in Western Germany whose school broadcasting is obliged by the broadcasting law "to observe in the broadcasts intended for instruction at Bavarian schools the curricula and educational plans in force in these schools". This results in the programme being as close to the curriculum as possible.
b) In the extra-curricular field school broadcasting contributes individual series to the "evening studio" programmes; the "Telekolleg" for educators was also produced by the school broadcasting department.
c) In addition to the school broadcasting magazine which is intended for teachers and

which comes out monthly, the school broadcasting department produces working material for the pupils on about 40% of the broadcasts.

6. Cooperation with school television

School radio and school television cooperate by coordinating their programmes and on occasional joint projects. The head of school broadcasting is a member of the School Television Board.

7. Cooperation with schools

There is no institutionalized cooperation between schools and school broadcasting, but there is close contact (at present through the Regional Audiovisual Centres) with teachers' further education and with working groups of teachers who take part in some school radio projects.

8. Cooperation with educational authorities

There is close cooperation with the "State Institute for School Pedagogics", an institution of the Bavarian Ministry of Education.

9. Recording rights

In accordance with the special copyright laws school radio broadcasts can be retained and used until the end of the school year. In particular the Regional Audiovisual Centres produce recordings which are made available to the schools on request.

10. Research

There have been studies on some projects. In 1975 the "Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen" carried out a comprehensive survey on the use made of school broadcasts which is available in printed form; it showed, among other things, that three-quarters of all Bavarian elementary and secondary modern schools make regular use of school broadcasts in their lessons.

Hessischer Rundfunk (HR)

Bertramstraße 8
D-6000 Frankfurt a. M. 1
Tel.: 15 51
Telex: 411 127, 411 583

1. Beginning of school radio broadcasts

The Frankfurt Broadcasting Station began transmitting school programmes as early as October 1926 on a trial basis; there have been regular broadcasts since 1928. After the war "Radio Frankfurt" resumed a regular school radio programme on 21st October, 1946. Since 1949 the broadcasting station has been called "Hessischer Rundfunk".

2. Broadcasting times

Seven broadcasting units (which as a rule comprise two quarters of an hour) of 30 minutes each a week, which are all repeated once, have been allocated to school radio broadcasts. So the total transmission time amounts to seven hours a week.

3. Staff

In the School and Children's Broadcasting Department there are 13 employees, namely

a) for school broadcasts: four editors, one school broadcasting adviser, five secretaries (two working half days), a choir assistant;
b) for children's broadcasting: one editor, one secretary.

4. Target groups

School broadcasting is directed towards all school age groups from the beginners (6 years old) to the secondary grade II (19 years old). In addition, special programmes are transmitted for the general public (see 5 b).

5. Subjects

a) The division of the programme branches does not coincide exactly with the subjects of the lessons. The school broadcasting programme is divided up into the following branches: primary grade (broadcasts for all subjects), political education, language and literature, nature and technology, history, music and religious instruction.
b) The school broadcasting department is also responsible for the following series of broadcasts, which are directed towards the general public: Language courses (30 minutes a week), "School and Home" (10 minutes), topical information from the educational field (10 minutes), "Minilektion" (10 minutes, a kind of school broadcast for adults).

6. Cooperation between school radio and school television

There is no cooperation with school television.

7. Cooperation with schools and

8. Cooperation with educational authorities

The school broadcasting adviser of the Hessischer Rundfunk visits the schools. The School Broadcasting Board, appointed by Hesse's Ministry of Education, advises the School Broadcasting Department and establishes the contact with the schools. The Secretary of the School Broadcasting Board (employed by the Ministry of Education) has his office at the Hessischer Rundfunk. The media expert of the Ministry of Education is a member of the School Broadcasting Board.

9. Recording rights

Recordings of school broadcasting transmissions can be used in the lessons six months beyond the time that is legally allowed. This arrangement is safeguarded by a contract and is taken into consideration with regard to fees. The Regional Audiovisual Centre may make recordings for schools and institutes for teachers' training.

10. Research

Studies are carried out only in specific cases and without the support of scientific establishments.

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Norddeutscher Rundfunk (NDR)

Rothenbaumchaussee 132–134
D-2000 Hamburg 13
Tel.: 41 31
Telex: 219 891

1. Beginning of school radio broadcasts

School broadcasts began on 12th November, 1945.

2. Broadcasting times

Mondays to Fridays	10.40–12.00 hrs
(3rd Channel)	15.00–16.20 hrs (repeat)
Mondays to Fridays	8.05–10.25 hrs (every second week, alternating with WDR)
(1st Channel)	

The daily transmission time is therefore 2 hours 40 minutes or 5 hours, the number of hours per week alternating between 13 hours 20 minutes and 25 hours.

3. Staff

The department consists of the departmental head and 22 employees, 10 of whom are editors.

4. Target groups

The broadcasts of the school radio department are directed towards pupils in all types of schools occurring in the area covered from the first year onwards.

5. Subjects

a) The following subjects in the curriculum are represented in the school broadcasting programmes: general knowledge, traffic training, German, religion, geography, history, social studies, school to work preparation, nature study, natural history (going over into biology, chemistry and physics), English and music.
b) As an extra-curricular subject listeners' education is provided.

6. Cooperation between school television and school radio

Apart from an exchange of information there is no coordination of the programmes.

7. Cooperation with schools

The school needs are determined by an interdisciplinary editorial board (see also 10). Teachers cooperate in finding the subjects and working out the manuscripts. Lessons are also visited. The school radio department participates in classes for teachers' training and further training.

8. Cooperation with educational authorities

Information is exchanged between the Ministries of Education in the area covered and the school broadcasting department on the basis of a voluntary agreement. The same applies to the coordination of programmes and guidelines or curricula of the 'Länder' in the area covered.

9. Recording rights

School radio broadcasts may be recorded by schools (as defined by the school law of the 'Land'). The recordings may be used only for purposes of instruction and their use is restricted to the current school year, after which they must be erased.

10. Research

Working groups of teachers who have tried out the series of transmissions in the current half year meet four times a year in order to analyze the programmes.

Radio Bremen (RB)

Heinrich-Hertz-Straße 13
D-2800 Bremen 33
Tel.: 42 71
Telex: 2451 811

1. Beginning of school radio broadcasts

Radio Bremen began transmitting school broadcasts on 6th December, 1948.

2. Broadcasting times

Mondays to Fridays 8.15– 8.33 hrs
15.05–15.45 hrs on the 2nd Channel.

The daily broadcasting time amounts to two periods of 40 minutes; 6 hours 40 minutes are available each week. In addition there is a 30-minute programme every other Saturday for the general public.

3. Staff

The school broadcasting department consists of three editors, who are assisted by four free-lance contributors (for the subjects English, French, and geography, and for primary school broadcasts).

4. Target groups

The target groups are the primary level (with 26 broadcasts in the second half of 1977), the 5th and 6th years at secondary school/guidance period (68 broadcasts), secondary level I (65 broadcasts), secondary level II (35 broadcasts). Selected programmes of a general educational content are transmitted fortnightly on Saturdays for a wider audience.

5. Subjects

In the second half of 1977 series were transmitted on the following subjects: English (55 broadcasts), world and environment (31 broadcasts), music (28 broadcasts), German (23 broadcasts), primary school (17 broadcasts), civics (16 broadcasts), French (11 broadcasts), history (10 broadcasts), current affairs (3 broadcasts).

Accompanying material: A school radio magazine (circulation 9,000) for teachers is published twice a year. It is arranged according to subjects and it intended to provide information on the programmes (issue No. 1: current affairs, world and environment, primary school, music, history, civics; issue No. II: French, English, German).

6. Cooperation between school radio and school television

In 1970 the first four out of altogether 16 coloured television lessons and 18 school radio broadcasts of the multi-media project "Speak Out!" for English instruction in the 7th school year were jointly produced by school radio and school television in cooperation with the Institut für Film und Bild in Wissenschaft und Unterricht (FWU), Munich, an institute for the production of audiovisual media. The cooperation of school television and school radio was continued in 1974 with 12 television programmes and 18 accompanying radio broadcasts in the series "Speak for Yourself" for the 8th school year.

7. Cooperation with schools

The relatively small area of broadcasting makes possible constant contact with the teachers, who also participate in the programme as advisers and authors. About 60% of the broadcasts are written by teachers.

8. Cooperation with educational authorities

Cooperation with the school authorities is limited to the authorities' distributing the school broadcasting magazine, which appears twice a year, to the schools.

9. Recording rights

The recording rights are laid down in paragraph 47 of the copyright law, i. e. the schools can record the school broadcasts for their own use, but they must erase them no later than the end of the current school year. Recordings can, however, be obtained on request from the Regional Audiovisual Centres in Bremen or Bremerhaven.

10. Research

A survey carried out in the schools in Bremen and Bremerhaven in 1974 showed that 1,783 teachers in these towns regularly use school broadcasts, that is about 10% of the teachers. The teachers in neighbouring Lower Saxony were not included in the survey.

RIAS Berlin

(Radio in the American Sector of Berlin)
Kufsteiner Straße 69
D-1000 Berlin 62
Tel.: 8 50 31
Telex: 183 790

1. Beginning of school radio broadcasts

School radio was founded in 1947 and began transmitting in 1948. In 1967 its name was changed to the RIAS Education Programme.

2. Broadcasting times

Mornings

Mondays	10.00 to 10.30 hrs RIAS I and II
Tuesdays	9.38 to 10.30 hrs RIAS I and II
Wednesdays	9.38 to 10.30 hrs RIAS I and II
Thursdays	10.00 to 10.30 hrs RIAS I and II
Fridays	9.38 to 10.30 hrs RIAS I and II
Saturdays	10.30 to 11.15 hrs RIAS I and VHF Hof

Afternoons

Mondays	16.00 to 16.30 hrs RIAS II
Tuesdays	15.45 to 16.30 hrs RIAS I
Wednesdays	15.45 to 16.30 hrs RIAS II
Thursdays	15.45 to 16.30 hrs RIAS I and II
Fridays	16.00 to 16.30 hrs RIAS II (with different programmes on I and II)

Evenings

Tuesdays	18.46 to 19.15 hrs RIAS II

The daily broadcasting time varies from Monday to Friday between 60 and 126 minutes, with 45 minutes on Saturdays. In the week 8 hours 20 minutes broadcasting time is available.

3. Staff

The staff consists of five full-time editors including the head of the department, three secretaries and 30 to 40 free-lance workers (authors).

4. Target groups

The educational programme (school radio) caters for pupils of the upper secondary level II (from about 15 years of age) as well as for any adults in West-Berlin who are interested in this type of programme, and, as a result of the particular sphere of responsibility of RIAS, for the same target group in the GDR.

5. Subjects

a) In our programme we largely consider the subjects of the curriculum, i. e. political knowledge of the world, contemporary history and history, social studies, literature, music and science.

b) Outside the curriculum current events in politics, science and culture are mostly dealt with.

6. Cooperation between school radio and school television

RIAS does not transmit television broadcasts.

7. Cooperation with schools

As a result of the regular series "Berlin schoolchildren discuss with politicians and artists – Prominent guests" the cooperation with teachers and pupils is very close.

8. Cooperation with educational authorities

The Board for Broadcast Media (school radio committee), whose members are appointed by the Senator for Schools, meets regularly, listens to broadcasts of the educational programmes department and comments on them and on the programme planning. The committee is composed of representatives of all types of schools, the universities, and other educational institutions.

9. Recording rights

The rights for "recording school radio broadcasts using tape recorders belonging to the schools" are based on a decree from the Senator for Schools dated August 1, 1969, which largely follows the regulations passed by the Federal Parliament. Accordingly, the schools may record school radio broadcasts only for their own use and must erase them no later than the end of the current school year. In addition, broadcasts, after approval by specialized committees for educational questions, may be acquired by the Regional Audiovisual Centre for their lending collection. To do this the copyright must be taken over by the Regional Audiovisual Centre.

10. Research

No regular studies are made, but in the case of some major broadcasts which have been organized together with the Regional Audiovisual Centre and the Sender Freies Berlin surveys have been carried out by means of questionnaires.

Saarländischer Rundfunk (SR)

Funkhaus Halberg
Postfach 1050
D-6600 Saarbrücken
Tel.: 60 21
Telex: 4428 977

1. Beginning of school radio broadcasts

The Saarländischer Rundfunk's school broadcasting began in 1956.

2. Broadcasting times

Mondays to Fridays 9.00– 9.30 hrs
17.00–17.30 hrs

The first transmission takes place on an afternoon and the repeat transmission a week later in the morning.

Since the beginning of the 1972/73 school year there has been school radio cooperation in the South-West of the Federal Republic of Germany between Süddeutscher Rundfunk (SDR), Saarländischer Rundfunk (SR) and Südwestfunk (SWF). It was originally arranged on the basis of 2:1:2, i.e. the school broadcasting programme, which is transmitted jointly and simultaneously was produced and transmitted for two days each by SDR and SWF and for one day by SR. Since the beginning of the 1973/74 school year SWF has been producing only school television programmes; all school radio broadcasting of the three stations is now produced and transmitted on the basis of 4:1 by SDR and SR (SDR on Mondays, Tuesdays, Thursdays and Fridays; SR on Wednesdays). In addition to this "Co-op School Radio", SR transmits 60 minutes of school broadcasting on Saturdays.

3. Staff

One fully employed editor is responsible for school radio broadcasting. School radio is a section of the Education Department.

4. Target groups

The target groups are the different school levels, which are indicated for each broadcast (primary level, secondary levels I and II). A point of emphasis of SR school radio is a constant provision of programmes for the final classes of the special schools, for which there is a particular need. These broadcasts can always be used for other types of schools as well.

All school radio broadcasts are, at the same time, directed towards the general public.

5. Subjects

Most of the school radio broadcasting series (there are no individual programmes) are connected with the subjects German, history, social studies. In the programmes for other subjects particular emphasis is placed on ethical teaching. As a rule, material for the teachers is supplied to the schools to make the broadcasts more profitable.

6. Cooperation between school radio and school television

There is generally no cooperation between school radio and school television, nor is there any official provision for it.

7. Cooperation with schools and
8. Cooperation with educational authorities

At the SR there is a School Radio Board with advisory functions, whose members (including representatives of the different types of schools) are appointed by the Ministry of Education. As an institution it provides cooperation with the schools and the Ministry of Education; there are also informal contacts with individual teachers.

9. Recording rights

Recordings of all the school radio broadcasts are made by the Regional Audiovisual Centre from where they can be obtained. The relevant Ministry of Education decree is, however, not precise enough on this point ("In producing copies of school radio broadcasts the schools and other persons authorized by paragraph 47 section 1 of the copyright law may avail themselves of the technical assistance of the Regional Audiovisual Centre") so that recording rights have not been satisfactorily cleared up. An amendment to the decree has been promised for some time.

10. Research

There are no studies on the programme in general or on individual series. In the last six years two surveys were carried out on the use of school radio; the last (1975/76) showed that school radio was used by about one-third of the teachers.

Sender Freies Berlin (SFB)

Masurenallee 8–14
D-1000 Berlin 19
Tel:. 30 81
Telex: 182 813

1. Beginning of school radio broadcasts

The Sender Freies Berlin was established by law of the 'Land' of Berlin dated 12th November, 1953, and began transmitting on 1st June, 1954. On 1st October, 1954, it began its own school broadcasts, the "Berliner Schulfunkstunde" (Berlin School Radio Hour).

2. Broadcasting times

The "Berliner Schulfunkstunde" is transmitted between 9.05 and 9.50 hrs from Mondays to Fridays. The first transmission is made on the previous afternoon. Thus a total of one and a half hours is available every day, 7½ hours of broadcasting a week.

3. Staff

The staff consists of one departmental head, three editors, one adviser for music instruction, one secretary.

4. Target groups

The school broadcasting department produces programmes for the primary level and the secondary levels I and II of the schools of general education and for the vocational schools. As has been shown by surveys carried out by INFRATEST, the daily audience in West Berlin alone also includes some 200,000 adults.

5. Subjects

From the beginning the emphasis in the school radio broadcasts was placed on contemporary history and political education. This point of emphasis is, however, only one area of school broadcasts, since our broadcasts are meant to deal with all the traditional subjects of education as well. Moreover, the "Berliner Schulfunkstunde" endeavours to give help to the school where it seems to be especially urgent. Examples of this are the ten-part series on "School to Work Preparation", the series "Introducing Linguistics", "The Economy Today", "Legal Problems in Everyday Life" and the broadcasts on the subject of "Leisure", which was suggested by the Broadcast Media Advisory Committee.

6. Cooperation between school radio and school television

At the Sender Freies Berlin school radio and school television both belong to the School and Adult Education Department; the departmental head is responsible for the organization of both sections. In this way all audiovisual programmes can be better coordinated. Thus at present the six-part school television series "Analyzing Films" is being produced in cooperation with school radio.

7. Cooperation with schools and
8. Cooperation with educational authorities

The "Berliner Schulfunkstunde" is advised by the Broadcast Media Advisory Committee (Beirat für Funkmedien), whose members are appointed by the Senator for Schools. Members of this committee are: representatives of the different types of schools; of the particular departments and of the Senator for Schools; the universities; the Regional Centre for Political Education; the "Pädagogisches Zentrum" (Pedagogical Centre) and the Audiovisual Centre of the City of Berlin.

9. Recording rights

The rights for "recording school radio broadcasts using tape recorders belonging to the school" are laid down in a decree of the Senator for Schools dated August 1st, 1969, which is largely based on the regulations passed by the Federal Parliament. This stipulates that schools may record school radio broadcasts only for their own use and that the recordings must be erased not later than the end of the current school year. In addition, broadcasts, after approval by specialized committees for educational questions, may be acquired by the Regional Audiovisual Centre for their lending collection. To do this the copyright must be taken over by the Regional Audiovisual Centre.

10. Research

No regular studies are made; in the case of special series (in cooperation with RIAS and the Regional Audiovisual Centre), however, questionnaires are sent out to determine the use and response.

Süddeutscher Rundfunk (SDR)

Neckarstraße 230
D-7000 Stuttgart 1
Tel.: 28 81
Telex: 723 456

1. Beginning of school radio broadcasts

The first school radio broadcasts were regularly transmitted by the Süddeutscher Rundfunk AG, Stuttgart, as from 9th January, 1932. At that time they were broadcasts which were transmitted every fortnight on a certain day of the week. The subjects were mostly restricted to the sphere of homeland and literature.

2. Broadcasting times

Today school radio broadcasting has been allocated two daily half-hour broadcasts from Mondays to Fridays from 9.00 to 9.30 hrs on the 2nd and 3rd Channels and from 17.00 to 17.30 hrs on the 3rd Channel. One of these times is a repeat. This means that the daily broadcasting time is one hour and the weekly time five hours.

3. Staff

Following a change in the staff and programme in 1976 today there is a staff of four independent editors, each in charge of his own specialized field, i. e.: science; music and literature; geography; history and classical studies.

4. Target groups and
5. Subjects

The Süddeutscher Rundfunk also produces its school programmes for the Südwestfunk and the Saarländischer Rundfunk. When thinking about a new concept the persons responsible for school radio broadcasting at SDR included the following questions in their considerations:
Is it possible to conceive of a school radio broadcast programme which will naturally be listened to both at school and at home by adolescents, schoolchildren, housewives and elderly people?
Is it possible to conceive of subjects, themes, materials and problems which can be reconciled both with the curriculum, the choice of lessons, and with the interest of 'outside' listeners?
Is it possible to find ways of presenting subjects and material which can be profitably used both in school and in leisure time?
In other words, is it possible to conceive of school radio broadcasting which represents a genuine pedagogical gain and aid and which at the same time retains its attraction outside the school?

Public discussions on "pedagogizing" and "humanizing the school", which had just been raised, were also helpful in answering these questions. The new concept was presented to teachers and educationalists, and, indeed, to everyone who wanted to become acquainted with the new programme of school radio broadcasting in the school radio broadcasting brochure in the following way:
"Above all, school radio broadcasting which places the valuable and significant object in the centre of its programme. School radio broadcasting which attempts to basically convey experiences with subjects and themes by using vivid examples. School radio broadcasting which should avail itself of the wealth and variety of sound documents and the dramaturgical possibilities offered by radio. School radio broadcasting which provides the school and other educational institutions with the treatment of a subject in a way that they cannot or can only inadequately afford. School radio broadcasting which is of interest to the school for its pedagogical rather than its didactic task, but which for this very reason can find interested listeners outside the school." (Summer 1976)

"School" and thus school radio broadcasting here represents an educational opportunity for the general public as well. Details of daily life are connected up with one another. The act of listening demands transfer to the personal level, to that of the pupil in school, to that of the old age pensioner in his flat in the morning, of the teacher who intends to use a broadcast in his lessons or of the car driver listening to the radio on his way home from work.

The school radio broadcasting of the Süddeutscher Rundfunk therefore intends to be – just as it is meant as working material for the teacher at school – at the same time school radio broadcasting for the children and adolescents who listen to it in the afternoon or in their holidays.

With regard to the choice of themes curricula and curricula discussions, as well as many other aspects, play a role in the three 'Bundesländer' in which the school radio programme is transmitted.

6. Cooperation between school radio and school television

In accordance with the school radio and school television cooperation agreed upon between the radio stations in the South-West of Germany, the joint programme of school television is produced by the Südwestfunk and by the Saarländischer Rundfunk. There is no cooperation with the school television departments of the SWF and SR.

7. Cooperation with schools and
8. Cooperation with educational authorities

There are very close contacts with groups of teachers and pupils as well as an exchange with the officials of the Ministries of Education responsible for curriculum development.

9. Recording rights

The regulations relating to recording rights (§ 47 copyright law) have been laid down by decrees from the Ministries of Education in Baden-Württemberg, Rhineland-Palatinate and the Saarland. These allow recordings of the broadcasts to be made for instructional purposes. But the schools can send for recordings of school radio broadcasts from their municipal or county Audiovisual Centres or receive them directly from their Regional Audiovisual Centres in Karlsruhe, Koblenz-Ehrenbreitstein, Saarbrücken and Stuttgart.

10. Research

Studies on the current programme are carried out at irregular intervals and usually only on individual series. The last major study on the use of school radio broadcasting in the schools was made some years ago and its findings resulted in considering and realizing the new concept mentioned above. Further information can be found in the annual brochure, which the school radio department will be pleased to send on request (Süddeutscher Rundfunk, Redaktion Schulfunk, Postfach 837, D-7000 Stuttgart 1).

Westdeutscher Rundfunk (WDR)

Appellhofplatz 1
D-5000 Köln
Tel.: 22 01
Telex: 8882 575

1. Beginning of school radio broadcasts

The first beginnings of school radio broadcasting from Cologne go back to the 20's: the WERAG (Westdeutscher Rundfunk AG, Cologne) transmitted the first school radio broadcast on a trial basis on 15th January, 1927. One year later, in 1928, regular broadcasts were begun – for the school subjects German, geography, music, English and French. In 1933, these early beginnings were brought into line in a "Reich's Hour for the German School", which was made to serve the propaganda of State and Party. This was followed by the war-time break.

After the initial editorial work had begun on 1st February, 1947, Cologne's school radio resumed its broadcasting for the first time after the war on 25th August, 1947. On this day the first school radio broadcast was transmitted from Cologne, for organizational reasons a contribution to the school radio programme of the then NWDR (Nordwestdeutscher Rundfunk) with its headquarters in Hamburg. In April 1950 an independent school radio department was set up at the NWDR in Cologne, which, when the WDR (1956) was constituted, also considerably expanded its programme on VHF.

2. Broadcasting times

At present the following broadcasting times are allocated to school radio:

a) On the 3rd Channel:	
Monday–Friday mornings	11.05–12.00 hrs
Monday–Friday afternoons	15.05–16.00 hrs
On the 1st Channel:	
Monday–Friday mornings	9.05–10.00 hrs
and	10.05–11.00 hrs
(every other week, alternating weekly with the NDR school broadcasts)	
a weekly total, therefore, of at least	9 hours 10 mins.
every other week	18 hours 20 mins.
Worked out on a weekly basis:	13 hours 45 mins.

In addition to the above times for school radio proper other areas are also the responsibility of school radio and these have the following broadcasting times:

b) On the 3rd Channel:
Saturday 14.30–15.00 hrs (language courses) = 30 min.
Saturday 17.45–18.00 hrs (German for German repatriates) = 15 min.
On the 4th Channel:
Sunday 11.05–11.20 hrs (language courses) = 15 min.
Wednesday 21.00–21.15 hrs (German for German repatriates) = 15 min.
The addition of a) + b) thus gives a weekly total broadcasting time of 15 hrs

3. Staff

There are 17 permanently employed members of the staff, 9 of whom are editors. In addition two teachers are regularly working on editorial work on a free-lance basis. The number of free-lance contributors varies between 80 and 100.

4. Target groups

As far as age is concerned the target groups range from 5 to 19 years. Points of emphasis in the programme are the primary school and the secondary level II, paying special attention to the reformed structure of the upper classes in the grammar schools; but above all the 11 to 15-year-olds (secondary level I), in particular pupils of the secondary modern school (Hauptschule).

5. Subjects

a) In our programme all subjects are taken into consideration, whose instructional contents can be covered, illustrated and supplemented, although with varying degrees of directness, by means of the media-specific potential of sound radio. Chiefly music, foreign languages, German (German literature), also history/politics, geography, school to work preparation, and economics.

b) Over and beyond the curriculum the most up-to-date subject matter is included in the fields dealt with, that is, even when it is not yet covered by curricular guidelines. Current affairs are also dealt with in special short broadcasts ("Key Word", "Topical Events of the Week", "Topical Geography"). Outside the curriculum there are broadcasts on the media (at present "The Tape Recorder Working Group") as well as special series of exercises to encourage listening and writing, such as the foreign language broadcasts mentioned under 2 b. Interdisciplinary contributions are provided for by, for example, discussions with pupils, chiefly on questions of behaviour and other problems of growing up.

6. Cooperation between school radio and school television

At the WDR, school radio and school television are in constant contact. When the programmes are being prepared the subject editors discuss from case to case on which subjects complementary presentations by means of the other medium might be desirable and, if so, how they might be realized. Initial cooperation of this kind has proved possible so far in the case of foreign languages, geography and economics. The fact that the head of school television is a member of the School Radio Advisory Committee and the head of school radio is a member of the School Television Advisory Committee also promotes the exchange of information.

7. Cooperation with schools

Cooperation between school radio and the schools takes place in several ways. The editorial board is constantly in touch with the school supervisory authorities and is represented at teachers' meetings by its subject editors. Lectures and programme discussions at district seminars, both in the radio station and elsewhere, provide information for future teachers on the medium and its programmes over and above that contained in our printed brochures. In cooperation with the 'Landesinstitut für schulpädagogische Bildung' (attached to the Ministry of Education) specialized conferences of both short and several days' duration deal partly or exclusively with school radio. In addition, the individual editor continually discusses his programme with a fairly small working group of subject teachers. Each six-monthly planning period is also talked over with a School Radio Programme Advisory Committee in which teachers for the different subjects and from different types of schools are represented.

8. Cooperation with educational authorities

The cooperation between school radio and the Ministry of Education occurs chiefly in the School Radio Programme Advisory Committee. The 21 members consist of five representatives of the Ministry of Education, including its media expert; lecturers from the teachers' training colleges; but above all teachers from the different types of schools specialized in different subjects (cf. 7). Apart from the ministerial representatives, the members are appointed to the Committee by reason of their individual personality and special qualifications. The Committee has only advisory functions.

9. Recording rights

With regard to recordings we are bound by paragraph 47 of the copyright law at present in force, according to which the schools may make recordings for their own use but must erase them by the end of the school year. Exceptions are made only when tapes are lent out for examination preparation work, as informational material for seminars, or for other purposes of study.

10. Research

There are no regular studies made of our programmes. On the other hand, there is a relatively large number of individual studies on various series and on groups of subjects, carried out in most cases as exam theses. More comprehensive surveys have been made in past years by INFRATEST. Recently (school year 1975/76) a quantitative and qualitative study was carried out by the Forschungs- und Entwicklungszentrum für objektivierte Lehr- und Lernverfahren GmbH (FEoLL), Paderborn, whose results are available.

Finland

Oy. Yleisradio Ab. (YLE)

Kesäkatu 2
SF-00251 Helsinki 25
Tel.: 44 11 41
Telex: 12-735

The statements below concern both the Finnish and the Swedish school radio of Oy. Yleisradio. We have a separate Finnish production team for foreign language programmes for schools and adults. Information about these programmes is included in the report, excluding however, the transmission times.

a = Finnish school radio b = Swedish school radio

1. Beginning of school radio broadcasts

School radio broadcasts started
a) in 1934 b) in 1935

2. Broadcasting times

The following times are available:

Monday	a) 9.05– 9.30	b) 10.05–10.25
	10.10–10.30	20.40–21.00
	16.05–16.30	
	18.50–19.30	
Tuesday	9.10– 9.30	10.05–10.25
	16.05–16.20	10.30–10.45
		18.10–18.30
Wednesday	9.10– 9.30	17.00–17.30
	10.10–10.30	
	17.00–17.20	
Thursday	9.10– 9.30	9.00– 9.25
	10.10–10.30	9.30– 9.45
	16.05–16.30	10.05–10.25
	18.15–18.40	
Friday	9.10–9.30	
	10.10–10.30	
Saturday		10.05–10.25

3. Staff

The staff consists of
a) 17 persons, of whom 9 are producers b) 4 persons, of whom 3 are producers

4. Target groups

The target groups are mainly comprehensive schools (grades 1–9) and to some extent also the upper grades (10–12). The language programmes produced by the Finnish school radio are also meant for the upper grades.
Moreover, we have informative programmes directed to the teachers.

5. Subjects

The programmes intended for pupils are closely connected with the school curriculum, and in the last few years there has been a clear tendency to have them even more closely united to the curriculum.
The school broadcasts comprise the following main groups: mother tongue, foreign languages, social orientation, music, natural sciences, ethic education and religion. Some programmes are broadcast in the form of radiovision (radio programme + series of slides).

6. Cooperation between school radio and school television

School radio, school television and adult education belong all to the same educational department. Planning and information are common and the transmission times are coordinated.

7. Cooperation with schools and
8. Cooperation with educational authorities

A commission for educational programmes, consisting of representatives of school authorities, teachers' organizations and YLE's educational departments is responsible for the cooperation. This consultative body has 14 members and its chairman is appointed by the Ministry of Education.
When planning the programmes we usually take advantage of teachers' and school authorities' expert knowledge. For tuition we have special contact teachers at our disposal. In addition, we keep in touch with teachers by arranging courses and meetings, for instance in different administrative districts of Finland.

9. Recording rights

According to § 17 in the Finnish copyright law it is allowed to record freely school radio programmes for educational purposes. In Finland there is both a State AV-Centre as well as many municipal ones. The schools also make recordings of the programmes.

10. Research

There are annual studies of certain serial programmes for follow-up and evaluation purposes. There is, however, no research done concerning the whole programme output of the school radio.

France

Centre National de Documentation Pédagogique (CNDP)

29, rue d'Ulm
F-75230 Paris – Cedex 05
Tel.: 3 29 21 64
Telex: –

1. Beginning of school radio broadcasts

The transmitting of school radio broadcasts was begun in 1952.

2. Broadcasting times

There are 12 hours of broadcasting time available weekly during the period 1977/78. The broadcasting time was extended between 1952 and 1973. It has been reduced since 1973, however, since fewer instruction broadcasts for foreign language teaching are transmitted. As opposed to this, there has been an increase in broadcasts for the elementary school level.

3. Staff

Approximately 26 co-workers (pedagogical and technical staff) are available for exclusively radio broadcast programmes, whereby the administrative staff has not been taken into account. The CNDP has no radio broadcast directors of its own; 5 directors from Radio France and 5 sound operators from CNDP work in the studio. 12 of the 15 co-workers in the production office are producers.

4. *Target groups*

School radio broadcasts are aimed at pupils of elementary schools and secondary schools (during school hours); at teachers (pedagogical information, between 17.00 and 18.00 hrs); at parents (a quarter of an hour weekly); and at persons participating in extension courses (every Saturday morning).

5. *Subjects*

For elementary schools: Subjects intended to activate the pupils' interests (introduction to history, geography, etc.), introduction to the fine arts (poetry, music, song).
For secondary schools: Foreign languages, information on current affairs, suggestions for reading, orientation aids for the pupils.
For teachers: Pedagogical information for teachers of the lower forms, information for French teachers, and for foreign language and philosophy teachers.

6. *Cooperation between school radio and school television*

School radio and school television work together in all the areas already mentioned.

7. *Cooperation with schools*

a) The CNDP has no separate department for school radio. The departments responsible are:
   - a "Département des Actions Multi-Media" (a department for multi-media activities), which has the task of planning all the educational programmes, using the various media (television, radio, print media). It is organized in the service of the public concerned (further education, elementary schools, secondary schools, state grammar schools).
   - a "Département des Productions Audio-visuelles"(a department for audiovisual productions) and a "Département des Publications" (a department for publications), which produce the written and audiovisual material.

b) The CNDP informs each school – and for special projects each teacher – about the programmes placed at their disposal. The schools, that is, the teachers, can subscribe to the accompanying materials which supplement the radio or television broadcasts. These materials describe the programmes by making clear their goals and by giving the teachers instructions for their use. A "Service d'Evaluation" (an evaluation department) does research into the actual effects of the programmes with the help of field studies, as well as by the distribution of sheets or questionnaires which have to be filled in.

c) The school radio programmes, which are worked out in cooperation with the Ministry of Education (see question No. 8), are also used by teacher training organizations for the purpose of further education of teachers.

8. *Cooperation with educational authorities*

The CNDP is a public institution of the Ministry of Education. It operates on the basis of annual programmes. The programmes planned between June and October of year A are produced between January and December of the following year (A + 1), and are transmitted during the course of the school year, beginning in October of year A + 1. The programmes for each level (elementary schools, secondary schools, state grammar schools, adult education) are worked out according to pedagogical guidelines set up by the Ministry of Education. In other words, they conform each year to the priorities set by the Ministry of Education. In addition, the suggestions made by the CNDP on the basis of research results are taken into consideration. The programme, which is planned in general outlines (for example, radio broadcasts for singing lessons in elementary schools, television broadcasts for training of 6th grade teachers according to the new guidelines etc.) is then worked out and realized by the CNDP's pedagogic staff, in cooperation with the Ministry of Education's department responsible for that particular subject matter.

9. Recording rights

As far as radio broadcasts are concerned, the CNDP reserves all rights for transmitting for school purposes. The conditions regarding the recording of these broadcasts on other carriers (records, cassettes), as is done by the CNDP, regional centres and schools, have not yet been clarified.
Certain problems were the subject of a special agreement with the copyright companies, and certain practices have been tolerated up to now. However, an arrangement is lacking in this area which is clear and orientated to the requirements of radio's educational broadcasts.

10. Research

Research into programme effects is carried out regularly. This is the task assigned to the CNDP's evaluation department, which publishes annual research reports. Future programme planning conforms to the results of these reports.

German Democratic Republic

Rundfunk der DDR

Nalepastraße 18–50
DDR-116 Berlin
Tel.: 6360
Telex: 11 22 76

1. Beginning of school radio broadcasts

School radio broadcasts were started in 1946/47 on what was then a state (Länder) level. Since the founding of the II. Programme of Radio DDR in 1960/61, a central school radio exists for the entire Republic.

2. Broadcasting times

a) Daily

40

b) **Annually:**

Information on civics and local history	approx. 4,500 min. =	21.5%
Literature, German/native language	approx. 4,300 min. =	20.6%
Natural sciences	approx. 3,700 min. =	17.7%
History	approx. 3,700 min. =	17.7%
French I, II, III	3,900 min. =	18.7%
Russian, class 8*)	400 min. =	1.9%
English, class 9/10*)	400 min. =	1.9%
	20,900 min. =	100 %

*) = supplement to the television programme

3. Staff

The school radio's editorial staff consists of 13 collaborators. They are divided into: 4 holders of diplomas in specific subjects who are journalists as well, 3 holders of diplomas in specific subjects, 2 certified journalists, 2 producers, a script editor and a secretary.

4. Target groups

The target groups are pupils from class 5 to 10 in secondary school, and pupils from class 11 to 12 in expanded secondary school.

5. Subjects

a) Subjects from the following areas of the curriculum are dealt with according to age and school level:
   - German/native language;
   - German and world literature;
   - German and foreign history;
   - Physics, chemistry, biology, astronomy;
   - Civics.

b) From the non-curricular area:
   - Broadcasts for working groups which are interested in:
     Physics, chemistry, biology, astronomy;
     Literature;
     Life in the National People's Army;
     People's Police (traffic police, criminal police, railway police, fire fighting force);
   - Contributions and broadcasting series on questions concerning:
     Socialist administration of justice;
     Vocational guidance and preparation;
     Health education;
     Local history;
     Acquaintance with foreign countries, peoples, and their customs.

From the beginning of the school year 1978 onwards gradual transition to stereo productions.

6. Cooperation between school radio and school television

In the curriculum-bound areas, school radio and school television transmit broadcasts which complement each other. The coordination is done via the Central Institute for School Radio and School Television in the following areas: foreign languages, civics information, and natural sciences.

7. *Cooperation with schools*

All schools are equipped with radios and tape recorders. Many schools set up their own record and tape libraries. The district centres for instruction materials lend out tapes free of charge. In several schools, the existing working groups are direct partners and participants in the production of broadcasts. The "German Teacher's Magazine" publishes the entire programme. The pamphlet "Radio Broadcasts for School and Recreation", as well as the journals for teachers, publish comments and the opinions of teachers and pupils.
In the "Instructions and Information" distributed by the Ministry of Education teachers are given details on school radio programmes and new developments, etc.

8. *Cooperation with educational authorities*

An equal partnership exists between the school radio and the Ministry for the People's Education (Ministerium für Volksbildung MfV). This is coordinated by the responsible department in the MfV, the Council for School Radio and School Television in the MfV, in which the station has seats and votes, and by the MfV's Central Institute for School Radio and School Television.

9. *Recording rights*

Recording and further usage are allowed. The performance and reproduction rights for educational purposes are free of charge in every respect.

10. *Research*

All research into broadcast effects is done by the Central Institute for School Radio and School Television. In addition to this, there are irregular but frequent studies done in the form of dissertations and papers written for the purpose of attaining a diploma.

Great Britain

British Broadcasting Corporation (BBC)

Broadcasting House
London W1A 1AA
Tel.: (01) 5 80 44 68
Telex: 265 781

1. *Beginning of school radio broadcasts*

School radio broadcasting began in the mid-1920's.

2. *Broadcasting times*

The times allocated for school radio are
Monday to Friday 9.05–12.00 hrs
14.00–15.00 hrs

These school radio broadcasts are transmitted for thirty weeks in the year, the schedul being divided into three terms, autumn, spring and summer, in accordance with the attendance dates of schools throughout the United Kingdom.

In addition to the national network of school radio, programmes are produced by the BBC in Cardiff, Edinburgh and Belfast for Wales, Scotland and Northern Ireland, and many of the BBC's twenty local radio stations in England provide school broadcasts for the locality they serve.

3. Staff

The staff of school radio includes the head of the department responsible to the Controller, Educational Broadcasting; three chief assistants who have the duties of executive producers and supervise parts of the output; thirty producers and one senior producer who has a particular responsibility for training new staff in production techniques and oversight of standards of production. Many of the producers are specialists in a subject or section of the curriculum, e.g. languages, science, music, geography.

4. Target groups

The target audiences for the radio programmes range from the four year old children in nursery schools and the five and six year olds in infant schools to the sixteen to eighteens in secondary schools and colleges of further education. The broadcasts have particularly large audiences in infant and primary schools where parts of the curriculum may be based on the use of BBC radio programmes.

5. Subjects

a) Curriculum needs feature strongly in determining the allocation of time and resources for radio programmes in a large number of fields in primary and secondary education; these include English language and literature for all age-ranges from 5 to 18; reading especially for pupils between 7 and 12; geography and history at primary and secondary levels; languages, predominantly French and German, but also including Spanish and Russian thus reflecting the balance of emphasis on European languages taught in British secondary schools; music for all age-ranges up to fourteen and movement and drama particularly important for infant and primary schools which are heavily dependent on the BBC's systematic provision of weekly programmes throughout the three broadcasting terms; religious and moral education for both primary and secondary schools including a weekly service for primary schools; science, mainly at primary level but also at the secondary level and including a number of radiovision programmes; careers and counseling is now a major curriculum objective in the programme output for pupils of fourteen years and over; health education is featured in separate series as well as being included in science series; outdoor education is included in the output, particularly with radiovision programmes, for secondary schools in response to the development in schools of outdoor activities related to the curriculum.

b) It has also been an important function of school radio to be innovatory and to be a stimulus to the extension of the curriculum. Hence units of programmes have been introduced to give schools the opportunity to select new topics or themes around which they can develop their own curriculum activity. These have included units of programmes on the law, politics, thinking, uses of language, African music, country dancing and modern dance.

6. Cooperation between school radio and school television

The BBC has separate departments of school television and school radio both of which work under the general responsibility of the Controller, Educational Broadcasting. The nature of the organization of the BBC's education departments both enables the radio and television sections to be part of the BBC's separate directorates of radio and television and to draw upon all their professional and technical resources, and to cooperate closely to provide a comprehensive service for schools on both media.

The school radio and school television programme plans are submitted to the Programme Committees of the School Broadcasting Council for the United Kingdom which sponsors all the school broadcasts of the BBC. The Council itself is composed of educationists representing the Department of Education and Science, the Scottish Education Department, the local education authorities, the professional associations of teachers, teacher trainers and local education authority inspectors and advisors. The Council has a permanent staff comprising a secretary, senior education officer and eighteen education officers with supporting secretariat including a Research Unit. The work of the Council is financed by the BBC.

The Council's Programme Committees take responsibility on the basis of the age-range of the audience; thus Committee I is responsible for the age-range $4^1/_2$ to 9; Committee II 9 to 13; and Committee III 13 to 18 years. These Committees determine the policy of the radio and television series, scrutinize the detailed programme proposals and consider the allocation and balance of programmes to radio and television. The Committees' recommendations then go to the School Broadcasting Council for final approval in the light of the Council's formulation of the general educational policy of school broadcasting and its regard for the overall balance of the output. Generally series on both media are planned to be used independently, although there are occasional exceptions. There are separate School Broadcasting Councils for Scotland, Wales, and recently, Northern Ireland. Each have programme committees responsible for the school broadcasts to the national regions.

7. Cooperation with schools

Cooperation with schools is organized through the School Broadcasting Council, its Programme Committees and its permanent staff of education officers. In addition, producers from school radio visit schools and have consultations with teachers.

8. Cooperation with educational authorities

The cooperation with the Department of Education and Science (which in Britain is the designation of the Ministry of Education) takes the form of regular consultations between officers of the Council and officials of the Department. Her Majesty's Inspectors of Education are represented on the Council and in the Programme Committees. There is similar cooperation in Scotland, Wales and Northern Ireland for the national regional broadcasts.

9. Recording rights

Recording rights have been agreed in this country so radio and television programmes can be recorded by schools and by resource centres designated by local education authorities, and retained for three years. Almost all radio programmes used by secondary schools are tape recorded; in primary schools about half the number of programmes used are heard directly from the broadcast transmissions.

10. Research

The Research Unit of the School Broadcasting Council conducts annual surveys at the primary and secondary level to establish the sizes of audiences, how many schools are equipped to receive radio and television broadcasts, and the extent to which equipment is used. The Research Unit also conducts each year special surveys to obtain qualitative information about the use of particular series as well as quantitative information. Education officers submit reports on their visits to schools and these reports provide detailed studies of the use of programmes in particular classroom situations. In addition to the above, consultative meetings with teachers are convened by education officers. Evidence on the use of series also provided by teacher's report cards, unsolicited letters by teachers, and work sent by children.

Hungary

Magyar Rádió és Televizió

Brody Sándor U. 5–7
H-1800 Budapest
Tel.: 338–330, 339–330
Telex: 225 188 marad h

1. Beginning of school radio broadcasts

In Hungary school radio started to operate in the school year 1963/64 with 90 minutes of programmes every week.

2. Broadcasting times

The broadcasting times at present are:
in the morning – 25 or 30 or 35 minutes every day
in the afternoon – 40 or 35 minutes twice a week
in the evening – 15 minutes every day, foreign languages
for adult education – 30 minutes every day

This altogether makes 475 minutes a week. Apart from these we have bi-weekly and monthly programmes. Within one year we broadcast 19 or 20thousand minutes altogether.

3. Staff

In school radio 12 producers and one organizer are employed.

4. Target groups

The target groups are:
lower grade of primary school – 6 to 10 year olds
upper grade of primary school – 10 to 14 year olds
secondary school – 14 to 18 year olds
adult education
further training for teachers

5. Subjects

We have programmes linked with the curricula in Hungarian language and literature, geography, biology, Russian language, French and English, music, history and mathematics.

We have programmes supplementing the curricula in geography, history, art history, chemistry, biology, philosophy, ethics, law, mathematics and music.

We have complex programmes which are not linked with one single subject, such as for example language/music/mathematics, the programme "Nyitnikék" and other science history programmes.

6. Cooperation between school radio and school television

School radio and school television co-ordinate their plans. Occasionally they organize jointly national or international conferences. The "Everybody's School"-programme, meant to realize adult education, is prepared on the basis of a common conception both in school radio and school television. Subjects related to social sciences have been undertaken primarily by school radio, those of natural sciences by school television.

Programmes for the further training of teachers are also prepared according to agreements between radio and television.

In case of foreign languages another type of cooperation has developed: in teaching French, a series for medium level students has been made whose radio and television versions supplement each other.

7. Cooperation with schools

It is not compulsory for schools to listen to the school radio programmes, but the Ministry of Educatin recommends this none the less. A booklet containing the material for the year is sent to the schools annually and the broadcasting times of each programme are advertized on posters.

To some of our programmes we also send methodological booklets to the schools, e.g. history, singing/music, foreign languages and mathematics.

We send prospectuses to schools about series of programmes available on tape.

When we start a new series, we ask teachers to try out the new programmes and write to us about their experience. We regularly organize consultations with the teachers in order to hear their opinion and advice.

On some occasions every year we have demonstrations of programmes in institutes for the further education of teachers and for graduating university students.

Once a year we publish a methodological booklet containing the experiences of teachers who use our programmes regularly.

Another indirect form of keeping contact is to give assignments in the programmes to which the answers are sent in by the pupils. Such a form has been established in mathematics, knowledge of the environment, mother tongue, foreign languages, singing/music, and history.

8. Cooperation with educational authorities

There is no superiority or inferiority relationship between the two institutions, the Ministry of Education is not a higher authority of school radio. The projects of school radio are compiled after consultations with experts from the Ministry but in formulating the programmes we are totally free.

A significant proportion of our programmes is copied by TANERT (school aids producing factory) which operates under the authority of the Ministry of Education. The Ministry proposes to the schools to buy them. The new school reform which comes into force in 1978 has included the programmes of school radio in the list of official teaching aids.

9. Recording rights

School radio buys the intellectual products from the authors in perpetuity and has the authority to use the programmes afterwards. The programmes bought on tape can be freely used by the schools.

10. Research

We yearly publish a methodological publication in which school teachers write about their own experiences concerning our programmes.

The Telecommunications Research Centre conducted an inquiry in 1973 on the basis of which it has published an essay about the usage of school radio and school television programmes. The rate of schools using programmes continually is 27 per cent.

Ireland

Radio Telefís Eireann (RTE)

Donnybrook
Dublin 4
Tel.: (01) 69 31 11
Telex: 5268

1. Beginning of school radio broadcasts

School broadcasting began in 1964 with the introduction of school television on February 4, 1964. There had been a school radio service in 1937 which could no longer be maintained during wartime scarcity and it came to an end in 1941. Although there was considerable interest among teachers, within the Ministry for Education and at the broadcasting service in introducing school radio, plans could be only at a discussion stage since RTE disposed of only one transmitter network. By 1973 a second VHF channel was built to provide national coverage for the Gaeltacht radio service (a service for the Irish speaking regions). The service being limited to evening hours, transmission time became available for a school service.

Discussion and planning began between the broadcasting service and the Ministry for Education. It was decided to start with a pilot service for primary schools in the Irish speaking regions. The pilot was for a school term (10 weeks) and programmes were transmitted from April 14, 1975, to June 27, 1975. The pilot was evaluated in terms of relationships and effectiveness and proved successful. Financial constraints on the Exchequer prevented the development of the service as was initially planned.

In the interim forms of out of school educational radio programmes have been provided (preschool series "Knock at the door" and "Buail Isteach") and a springboard programme for 10/11-year-olds.

2. Broadcasting times

The pilot radio programmes were transmitted at 11.00 hrs and 14.00 hrs on VHF network. Post primary schools radio in the coming year will be transmitted during school hours at various times.

3. Staff

The educational programme department deals with radio and television, for the whole spectrum of education – preschool/school/adult and some out of school work.
The programme staff is as follows:
Department head, 4 radio producers, 3 television producers (contains editorial function); 2 education officers: evaluation, methodology, aspects of relations with schools and educational bodies.
In addition, there is a programme organizer whose function it is to coordinate the support services, such as ancillary material, print, cassettes, filmstrips and to procure programme material from external sources. There is also the usual secretarial services available.
Experts in particular subject areas, script writers and consultants are contracted on a fee basis for specific projects.

4. Target groups

Our educational service is concerned with the whole spectrum from preschool to adult and continuing education. Major priority areas have been identified for young people, preschool and the transition from school to work.
The development of a primary school radio service postponed in 1975 is now actively under consideration. Actual provision includes preschool, post primary, inschool and out of school education for the primary age group.

5. Subjects

In post primary school radio, series will be provided in literature and language in addition to music.
School to work preparation is not yet part of the formal curriculum, and programmes in this subject are provided on radio and television, e.g. the radio series "Launching out" with emphasis on rural pupils and "Out on your own" with emphasis on urban pupils.

6. Cooperation between school radio and school television

School radio and school television are in the same programme department. Although multi-media series in the strict sense have not been undertaken as yet, the recent availability of resources in both media has allowed for common planning; thus television is now being used for such areas as regional geography and radio for literature and personal development. The decisions take account of the suitability of the medium to the task as well as economic factors.
There is total integration of the work of the education officers.

7. Cooperation with schools

In the pilot service, consultation on teachers' resource needs were carried out extensively with the cooperation of the Irish National Teachers Organization by means of face to face meetings in each district as a first step in planning. Follow-up meetings were held two months prior to the first transmission date to present sample programmes, discuss possible follow-up, explain intentions regarding continuous consultation and to identify local volunteer leaders. During the course of the transmissions, these leaders arranged meetings (monthly) with teachers. Local Department of Education Inspectors and RTE Education attended. The ongoing feedback was to have informed further development.

Leader teachers were given a one day advance familiarization course with radio. The intention had been that these teachers would form the basis of further links with teachers in other areas, through teachers own inservice work, with the support of the Broadcasting/Ministry partnership and in this way teachers' needs and views would be more clearly articulated (a responsive rather than an imposed service).

Due to recent difficulties, this model is used in a much attenuated form.

Information to schools is provided through an annual timetable; notes for teachers (and in the case of the radio pilot, for pupils); announcements in RTE Guide, on air and through the press and notification to teacher organizations.

8. Cooperation with educational authorities

From 1964–1976, formal school programmes were paid for by the Ministry of Education. Policy was the responsibility of the Ministry and production that of the Broadcasting Authority. The yearly agreements on programme policy and cost were made between the organizations. Day to day interpretation of the decisions were assured through informal contacts at working level between the Ministry's subject specialists and RTE's production staff. The Broadcasting Authority had an Educational Advisory Committee to advise on general matters, including liaison with schools, evaluation etc. and this aspect of the work was the responsibility of the Broadcasting Authority.

Early in 1977, the Broadcasting Authority, under the terms of new legislation appointed a new Educational Advisory Committee to review past arrangements and make recommendations for the future.

In the interim, the programme makers consult with relevant people (teachers, guidance personnel, ministry experts) on an ad hoc basis.

9. Recording rights

Limited agreements for off air rights were negotiated for the school radio pilot which permitted schools to record programmes "off air" and retain the tapes for up to three years.

New contracts for schools now contain a clause clearing off air rights subject to additional payments. There remain difficulties with rights for off air recording from other sources. Off air rights is the single greatest barrier to effective classroom use of school broadcasting.

10. Research

Regular studies are carried out on school broadcasting under the broad headings:

Formative evaluation: research on needs and interest of target audience; pretesting of programmes; preview for teachers of selected programmes. (Techniques include questionnaires, face to face questioning, classroom observation, recall and other tests, teachers' opinions).

Statistical information: Collected by questionnaires.

Summative evaluation: post broadcast questionnaires to all schools and intensive study with limited sample of target audience. This information influences (subject to other constraints) the decision-making process and is of practical day to day value in approaching new productions.

Built into the process is detailed consultation with teachers so that broadcasting is integrated into their curriculum development procedures. The methods are in the early stages and results so far show its value in enhancing the relevance and effectiveness of the service.

Final remarks

The development of radio as a significant part of our school broadcasting service is for us of primary importance. In a period of economic difficulty, it provides a flexible medium which can enrich the range and extent of resources for a changing school situation. We feel it essential, however, to concentrate effort on the development of techniques to engage the interests of children in an age when voluntary radio listening is not very widespread: this is particularly true outside the field of music education.

Our researches have revealed that programmes which exploit the techniques of radio to the full – music, effects, dramatization – and which build on the interests of the audience (fun, adventure, reflection of their own emotions and observations), which stimulate their active engagement and response (both on and off air) are also the most effective educationally.

Italy

Radiotelevisione Italiana (RAI)

Via Orazio 21
I-00915 Roma
Tel.: 3 87 81
Telex: 61 142

1. Beginning of school radio broadcasts

School radio broadcasts began in Italy in 1934. In 1975 the law of reform of radio and television set up the Schools Department which works for both radio and television, and which consists of four programme planning units, each structured according to the following four areas of education: kindergarten (3 to 6 years old), obligatory schooling (6 to 14 years old), higher secondary schooling (14 to 18 years of age) and adult education (over 18 years of age).

2. Broadcasting times

In 1976–77: Two weekly programmes of 30 minutes each for each programme planning unit, on different radio networks (8 programmes, in all, of 30 minutes a week).

3. Staff

One director of the Schools Department, 2 assistants, 4 unit directors and one supporting director, as well as some 62 employees and producers working on television and radio programmes.

4. Target groups

Schools of all types and degrees, certain regions (for which educational broadcasts are needed in some school subjects), local bodies which are responsible for organization in the field of school and preschool training.

5. Subjects

Since 1975: all subjects relating to the various age groups, serving to widen children's interests at the different age levels and to promote their social and cultural growth, at the same time stimulating a new awareness of their problems on the part of parents and educators.

6. Cooperation between school radio and school television

School radio and school television work together in all programme planning units of the Schools Department.

7. Cooperation with schools

The Schools Department, through the four programme planning units, is in liaison with all the social and cultural bodies operating in Italy: These consist of schools of every type and degree, schooling districts, local committees, socio-cultural groups, cultural associations, teaching research centres, etc., and the Schools Department collaborates with them in the presentation of "educational projects" and in the carrying out of programmes.

8. Cooperation with educational authorities

Until 1975 Italian school radio produced its programmes exclusively in convention with the Ministry of Public Instruction. Besides the programmes carried out in agreement with the Ministry of Public Instruction, it seemed appropriate, following the law reform of radio and television in 1975, to provide for autonomous initiatives of the Department, aimed at the future cooperation with the schools and at the promotion of a basic training action inside schools and out, through the language of radio and television.

9. Recording rights and
10. Research

As regards the utilization of programmes which have been or are about to go on the air, the whole of 1977 has been used mainly for the working out of systematic procedures in this sector which is a particularly complex one and which covers:

a) immediate measures: the conception of programmes foreseeing the combined use of radio and television;
b) graphic aids, which will be developed in future chiefly in the "qualitative" direction, the editing work being carried out by those in charge of the programmes themselves (internal employees, film directors, consultants);
c) organization of audiences;
d) videocassettes: agreements are being drawn up with those bodies which will arrange technically for the transfer of tape contents, also comprising a description of the necessary organizational and administrative procedures connected with the managing of videocassettes and radio recordings at regional headquarters, for loans of material to schools and other cultural centres, for the cataloguing of cassettes, and charging for them;

e) research activities will be pursued in two essential directions: 1. determining of "educational demand", with special reference to audiovisual aids in the schools; 2. research on learning effects, to be conducted in close collaboration with those in charge of educational programmes. These research activities will be carried out in collaboration with the Audience Research Department and the Study and Documentation Office of RAI.

Netherlands

Katholieke Radio Omroep (KRO)

Postbus 9000
Emmastraat 52
Hilversum
Tel.: 4 91 41
Telex: 43 223

1. Beginning of school radio broadcasts

School radio broadcasting started as early as 1929, however, time was not yet ripe and the real start was made in 1948.

2. Broadcasting times

At present, we broadcast two hours a week, with the exception of the summer holidays (two months) and one week each at Christmas and Easter.

3. Staff

Our regular staff consists of two producers, one secretary and one administrator, assisted by about six free-lance producers.

4. Target groups

The groups we are trying to reach are: the nursery school, the elementary school, the secondary school, the special schools, the pedagogical academy and the parents.

Proportionally:

nursery school		about 11 programmes of 20 min.
elementary school	7– 8 years	about 11 programmes of 20 min.
	9–10 years	20 minutes a week
	11–12 years	35 minutes a week
secondary school		30 minutes a week
pedagogical academy and parents		depends on the extra time allocated
special schools		10 minutes a fortnight

Moreover, we pay attention to:

children's books	10 minutes a fortnight
catechize programmes for the elementary school	12 x 20 minutes a year
catechize information for the parents	10 minutes each theme (4)

5. Subjects

In our programmes all kinds of subjects and themes regarding social aspects and educational information are presented. Our guiding principle is to give help to those who need stimulation and who want to have a subject treated from a different point of view. Of course, the auditive aspect and the item as such play the most important part.

6. Cooperation between school radio and school television

So far, there has been no cooperation within KRO, however, in 1978 a start will be made for a 10 minutes programme a week.

7. Cooperation with schools

We cooperate with the schools by means of working groups and meetings, by correspondence and telephone calls.
There are different working groups for the nursery/elementary school, for the secondary school and the special schools. Each group is divided into an evaluation group (informing us about the reactions in the country) and an editorial group (discussing the programme projects with us).

8. Cooperation with educational authorities

There is no cooperation with the educational authorities.

9. Recording rights

The school radio programmes can be recorded for private use, but it is not allowed to sell these private recordings.

10. Research

We could cause studies to be undertaken occasionally, but this has happened only once. Investigation reports are made regularly, about once in three months, covering all programmes broadcast during that quarter of a year.

Nederlandse Christelijke Radio Vereniging (NCRV)

Schuttersweg 8
Hilversum
Tel.: 1 36 51
Telex: –

1. Beginning of school radio broadcasts

NCRV school radio started broadcasting in 1929.

2. Broadcasting times

The broadcasting times are
Monday 13.30–14.30 hrs
Wednesday 9.00–10.00 hrs

3. Staff

The staff consists of 11 full-time and 1 part-time collaborators.

4. Target groups

The target audience consists of different groups between 5 and 17 years of age.

5. Subjects

There is no general curriculum in Holland. Every school has its own curriculum. On the basis of available data of experience NCRV school radio is trying to correspond to the curriculum as much as possible. The programmes refer especially to current affairs.
NCRV school radio offers a complete curriculum for religious teaching which is used by many schools. Religious broadcasts correspond with this curriculum, of course.

6. Cooperation between school radio and school television

There is growing cooperation between school radio and school television. The same steering committee is responsible for both media.
This year, a start has been made with a multi-media series of programmes for daily news and current affairs. This series consists of weekly four radio programmes and one television programme as well as a printed paper for each pupil. This multi-media series of programmes is being made in cooperation with the Catholic Broadcasting Union in Holland, the Katholieke Radio Omroep.

7. Cooperation with schools

The steering committee of the NCRV school radio and school television programmes consists of experts in the educational field (two thirds) and of representatives of the broadcasting side (one third). It is responsible for the planning of all programmes within one school year. Delegates from among the ranks of the educational experts are guiding the producers in making the programmes.

8. Cooperation with educational authorities

There is no, not even a financial, cooperation with the Ministry of Education.

9. Recording rights

It is permitted to copy school radio programmes for educational use in private groups. It is even possible to order school radio programmes on tapes from the NCRV provided that they are used in accordance with the above conditions. These tapes can also be borrowed free of charge in all libraries in Holland.

10. Research

Studies are only done occasionally as financial means for such studies are not or insufficiently available.

Nederlandse Omroep Stichting (NOS)
Regionale Omroep Friesland

Postbus 642
Prinsentuin
Leeuwarden
Tel.: 2 01 67
Telex: –

1. Beginning of school radio broadcasts

School radio broadcasts in Friesland, which is a province of the Netherlands with 550,000 inhabitants, started in January 1973.

2. Broadcasting times

The time available for school broadcasts is 10 hours per year. They are transmitted every second Tuesday from 9.15 to 9.45 hrs.

3. Staff

The staff consists of one chief editor for production and accompaniment and one free-lance editor/producer. In addition, there are two members of the Joint Centre for Pedagogic and Didactic Services who are responsible for the production of the written material.

4. Target groups

The target groups are:
- pupils in lower classes (1 and 2; aged 6, 7, 8)
- pupils in middle classes (3 and 4; aged 9, 10)
- pupils in higher classes (5 and 6; aged 11, 12, 13).

Moreover, we pay great attention to the difference between native-born Frisian children and non-Frisian children, particularly with reference to the native language.

5. Subjects

In general, we try to make programmes which enable the children to get along in the world around them. Sometimes we select subjects which are wanted or suggested by teachers; furthermore, we make programmes related to topical events, and programmes with pictures simultaneously shown in the schools (especially biological and historical themes). We present many new songs and stories, special programmes (e.g. "USA 200 years, relationship to Friesland"), Frisian language teaching, etc.

6. Cooperation between school radio and school television

We do not have school television in Friesland.

7. Cooperation with schools

Listening to the radio programmes is voluntary for schools (at present 300 schools do so); the schools receive the written material and get a description of the broadcasts. The editor/producer of school radio and the didactic expert pay visits to the schools. They ask the teachers for their wishes and experience and take them into consideration. We undertake brief studies on specific problems.

8. Cooperation with educational authorities

This question does not apply to the situation in our province.

9. Recording rights

No statement

10. Research

No studies are carried out on the programmes. Occasionally there are discussions about and reviews on the programmes within the staff and with representatives of the schools.

Stichting Nederlandse School Radio (SNS)

P. O. Box 115
Hilversum
Tel.: 4 27 00
Telex: –

The Stichting Nederlandse School Radio (Dutch School Radio Foundation) was founded by three radio (and television) organizations, namely A.V.R.O. (Algemeene Vereniging Radio Omroep), The Omroepvereniging V.A.R.A. and the Omroepvereniging V.P.R.O. Since 1973 only A.V.R.O. and V.A.R.A. participate in the School Radio Foundation.

1. Beginning of school radio broadcasts

School radio broadcasts started in 1951.

2. Broadcasting times

Three programmes of twenty minutes each are broadcast weekly. In total, forty hours are made available during one year.

3. Staff

The Foundation has an office at its disposal which is responsible for organization, distribution, financial affairs and research.
The head of the offfice and a secretary are part of a so-called programme staff. Other members of this programme staff are four editors/producers who are staff members of the broadcasting organizations mentioned before and are primarily responsible for school radio productions.
An educational advisor also assists the staff which consists of seven persons altogether.
Depending on the number of programme series there are several free-lance editors/producers.

4. Target groups

The target groups are primary schools, especially grades 3 to 6.

5. Subjects

Subjects covered by the curriculum are:
Physics, biology, history, subjects concerning social and human relations, communication and understanding, the use of the native languages.

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Subjects not covered by the curriculum include:
Playing chess, application of algorithms on identifying rules and concept learning, astronomy.

6. Cooperation between school radio and school television

There is no cooperation between school radio and school television.

7. Cooperation with schools

A cooperation between the school radio department and the schools has not been regulated in a formal and official way. In spite of the lack of direct and official cooperation the interests of the schools are nevertheless looked after by a so-called School Radio Advisory Council. Four members of the Council are representatives of Educational Development and of innovation centres of the primary education system.

8. Cooperation with educational authorities

There is no cooperation with the Ministry of Education. Each broadcasting organization is fully responsible for its programmes. The Ministry of Education cannot exercise any kind of influence on the organization of the school radio and consequently cannot exert an influence on the choice and editing of school radio programmes.

9. Recording rights

At the moment, recording rights and subsequent uses of the programmes permit schools to record them; the recording is to be used for non-commercial and internal school purposes only.

10. Research

Studies are carried out regularly. Research on programme policy and programme effectiveness is done in cooperation with the Department of Educational Sciences of the University of Amsterdam.

Norway

Norsk Rikskringkasting (NRK)

Bjørnstjerne Bjørnsons Plass 1
Oslo 3
Tel.: (02) 46 98 60
Telex: 16 820 NRUTL, 11 023 NRRAN

1. Beginning of school radio broadcasts

In 1927/28 a series of trial broadcasts were initiated for some secondary schools in Oslo. After this, a committee was formed, the result of which was the introduction of permanent broadcasts for schools as from January 1931.

2. *Broadcasting times*

The following broadcasting times are available for school radio:
Monday to Friday 10.10–10.35 hrs.
11.00–11.20 hrs.

3. *Staff*

The staff of school radio includes the section leader, five programme producers, one head clerk, one programme assistant and one office clerk.

4. *Target groups*

The target audience of radio programmes are pupils of the preparatory school and the secondary school.

5. *Subjects*

40% of the programme time is used on music and foreign languages. The remaining programmes deal with geography, civics, science subjects, history and religion. However, the programmes of the school radio do not aim at covering any particular subject or range of subjects. All programmes are meant to be supplementary tenders to the schools.

6. *Cooperation between school radio and school television*

There is no organized cooperation between the school radio and the school television.

7. *Cooperation with schools*

There is no joint action between the school radio and the schools. The school programmes are a free tender offered to the schools by NRK.

8. *Cooperation with educational authorities*

School radio is a section within the NRK which is an independent state institution under the jurisdiction of the Ministry of Church and Education. Apart from this there is no organized relationship between the school radio and the Ministry of Church and Education.

9. *Recording rights*

A Royal Decree of 20th October 1967 contains the following provisions: As an aid to school teaching it is permitted to produce sound recordings of transmitted school broadcasting programmes or other broadcasting programmes mainly aimed at teaching. Such recordings may only be made by a school or a recording institution approved by the Ministry (of Church and Education). The recordings produced must not be used for any other purpose and not outside the school premises.

This provision does not cover recordings made direct from grammophone records or sound tapes produced for commercial purposes. Nor does it cover recordings for dancing schools or schools which, according to special provisions of the Ministry, do not fall under the jurisdiction of these rules.

Regardless of the character or composition of the programme the institution pursuing such activity on a professional scale must pay permanent fees per produced copy. The fee shall be shared between the Fund for Performing Artists, Norwegian Authors' Fund and TONO (Norwegian Composers' Association's International Music Bureau). Any dissension concerning the size and distribution of the fee shall be submitted to the Ministry whose decision is final.

10. Research

During the period from 1946 to 1977 studies have only been undertaken twice.

Poland

Polskie Radio

ul. Myśliwiecka 3/5/7
PL-00-950 Warsaw
Tel.: 43 80 00
Telex: 813 522

1. Beginning of school radio broadcasts

Polish Radio began broadcasting programmes for schools in 1936. Initially, they entailed short ten-minute programmes for teaching Polish, which contained exercises for the pupils and methodical instructions for the teachers. Over the years, the programme developed, with respect to content and to form. After a five-year interruption caused by the Second World War, Polish Radio resumed its broadcasts for schools in 1947.

2. Broadcasting times

School programmes are regularly broadcast on the same frequencies in three programmes of Polish Radio.

In the IV. Programme (educational programme) on VHF:
daily 9.00– 9.20 broadcasts for the 1st–4th classes (elementary instruction)
daily 10.00–10.30 broadcasts for the 5th–8th classes (upper elementary classes)
daily 11.00–11.30 broadcasts for secondary school pupils
Tuesday and Friday 9.40–10.00 broadcasts for kindergarten

In the II. Programme on the medium wave:
Monday and Wednesday 9.40–10.00 repeat broadcasts for kindergarten

In the I. Programme on the long wave:
daily 13.00–13.20 repeat broadcasts for the 1st–4th classes (elementary instruction)

In all, there are approximately 14 hours of school radio broadcasts per week, including the holiday programme for schoolchildren, such as classical drama and the recording of school concerts at the Philharmonia.

3. Staff

The school radio programmes are prepared by a team of 16 programme editors and three secretaries.

4. Target groups

Polish Radio broadcasts programmes for all age groups, beginning with the infants in kindergarten, among them the six-year-old preschool age group, and continuing to all primary school pupils (7–14 years old) and secondary school pupils (15–18 years old).

5. Subjects

The subject matter of our broadcasts consists of either selected aspects of the obligatory subjects of instruction (notably those which present difficulties for the teacher), or areas which go beyond the scope of the curriculum and extend the pupils' range of knowledge. In choosing their themes, the programme editors are also guided by the main principle of our national educational reform, namely the pedagogic objectives of instruction:

- for children at kindergarten, programmes are elaborated with an artistic/creative emphasis, with elements enabling to practice rhythmical games; radio plays containing pedagogic themes; programmes for six-year-olds with exercises introducing basic mathematical concepts and games to promote physical training, etc.
- for pupils in the 1st–4th classes (elementary instruction), there are programmes teaching Polish, mathematics, history, biology, music, and the series "Schools' Theatre" which is broadcast throughout the whole year.
- for pupils in the 5th–8th classes (upper elementary classes), lessons are broadcast for instruction in Polish, history, civics, biology, geography, physics, chemistry, music, together with the "Schools' Theatre" series.
- for secondary school pupils there are broadcast lessons for Polish, an introduction to social sciences, preparation for life in the family, civics, chemistry, biology, music, together with classical drama and series which go beyond the school curriculum. These include a series of diverse problems classified under the heading "Culture", designed to acquaint young people with contemporary cultural phenomena and their causes; the series "Myself and others" is an introduction into the problems of ethics and morals; "Chemistry today" brings the chemistry educational programme up-to-date and widens its scope with questions concerning the latest discoveries and their application in various fields of life. Moreover, there are series specially for 'Olympic participants' (young people preparing themselves for specialized Olympiads) which go beyond the school curriculum. Finally, there is a series called "Looking at today", in which young people and journalists participate in discussions on the major political issues of today.

6. Cooperation between school radio and school television

In principle, cooperation consists in the periodic coordination (once a year) of the major courses to be pursued in programming work. In addition, school radio and school television are in agreement that the former should concentrate on humanist disciplines (literature, languages, artistic/creative subjects, socio-political instruction), while leaving those subjects to television which require a visual treatment, such as art or the exact natural sciences. No attempt is made to produce joint programmes, instead it is presupposed that perfection is more likely to be achieved by optimum exploitation of the diversity of the means at the disposal of radio and television.

7. Cooperation with schools

The programme department maintains constant contact with the schools via a written survey of programme evaluations involving almost two-thousand primary and secondary schools (a card index is kept up-to-date by permanent staff members) and by means of consultations on programme planning with teachers from the different school categories. The teachers also regularly evaluate the school broadcasts in a special pro-programme, "Broadcasting for schools", which runs three times a week. This magazine programme provides information on each of the foregoing radio broadcasts, presents the teachers' opinions of the value of the school broadcasts for use in class, and gives didactic suggestions for using them effectively.

8. Cooperation with educational authorities

The Ministry of Education has introduced school radio broadcasting as a method of instruction into the new teaching programme of the 10-class school system and sketched out the complex of questions for which school radio broadcasts are to be produced.

The programme department works in close cooperation with the Institute for School Programmes of the Ministry of Education when planning programmes for school broadcasting. The Institute's experts stand by as permanent scientific advisers in this context.

The Ministry has also given consideration to methodological questions, such as the use of audiovisual aids for the training of teachers and their supplementary training. Trainee teachers have been asked to examine how far the school radio broadcasts have been used by teachers.

Together with the Centre for Public Opinion Research and Programme Studies, the Ministry conducts periodic surveys on the extent to which broadcasts are actually used in the schools, and checks that the schools are properly equipped with radios. The last surveys were carried out in 1975. The Ministry recently advised the schools to install archives of recordings of school broadcasts.

9. Recording rights

Both the Polish Radio and the Ministry of Education are encouraging the schools to furnish themselves with tape recordings of school radio broadcasts. These recordings are made by "Wifon", a recording organization set up specially by the Polish Radio and Television Committee which closely observes the legal provisions applying to author's rights and the regulations governing the distribution and repeat broadcasting of radio programmes. In line with these regulations, every author, programme director and performer or speaker is entitled to 50 per cent of the fee paid for the premiere of a broadcast when this is repeated. "Wifon", an enterprise which also covers its own costs, sells ordered tape recordings to schools and other institutions and is obliged to remunerate all authors' fees.

Quite frequently, schools record broadcasts themselves for use in class; but in this case no authors' rights are insisted on.

10. Research

Research projects are carried out by the Scientific Institutes for Pedagogics and Didactic Aids, and by the Centre for Public Opinion Research. They are largely concerned with surveying the extent to which the broadcasts are actually used, and to what degree they increase the knowledge and enhance the motivation and attitudes of the pupils.

The most interesting study carried out so far examined the degree to which a radio play with a central pedagogic theme influenced the attitudes of young listeners. Unfortunately, however, there is still a lack of wide-range surveys which attempt to ascertain how such broadcasts are received and assimilated.

Research into the extent to which school radio broadcasts are used has shown that 91 per cent of all primary schools and 54 per cent of all secondary schools use them in class.

Teachers are also making intensive and systematic use of these broadcasts in the lower primary school classes. Teachers in rural schools make much more use of school radio

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than their colleagues in urban areas. Teachers in more advanced schools make less use of school radio in their classes. The most widely distributed form of using the broadcasts continues to be direct reception.

Spain

Radiotelevisión Española (RTVE)
Radio Nacional de España (RNE)

Casa de la Radio
Prado del Rey
Madrid 24
Tel.: 2 18 32 40
Telex: 27 366

1. Beginning of school radio broadcasts

The Educational Programme Department of the Spanish National Radio, in charge of all school radio activities of its broadcasting network, began to function at the beginning of 1966.

2. Broadcasting times

The broadcasting of all educational programmes, including school radio, has a time schedule from 7.00 to 14.30 hrs. on the Third Programme at its disposal. It also has at its disposal 20 minutes every week (Saturdays) on the medium wave of the National Programme or First Programme, as well as 30 minutes on the short wave programmes beamed out to Europe (External Service).

3. Staff

All school radio programmes are in the hands of two teams, one team for the "Radio School", produced by seven script writers, and a special team for programmes for educators ("Appointment with the educators"), produced by two other script writers.
School radio participation programmes (such as "Misión Rescate", "Legión verde" and "Torneo Nacional Radio Escolar") are in the hands of three script writers.

4. Target groups

Our goal is twofold:

a) Direct school radio programmes: complementing school activities through English, French and music classes, since many rural teaching centres do not have an adequate instructing staff; programmes dealing with instructive orientation and school subjects for teachers and educators.

b) Participation programmes: to promote, through the active participation of pupils in groups or teams, the interest in art, nature, and archeology or the liking for music, song or theatre.

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5. Subjects

The programmes do not deal with concrete subjects of the actual school curriculum, with the exception of French, English and music, but promote extra-curricular activities which are complementary and independent of regular teaching.

6. Cooperation between school radio and school television

The activity of the Educational Programme Department of RNE is exclusively related to radio broadcasts.

7. Cooperation with schools

The cooperation between the Educational Programme Department and the schools is neither regulated nor structured. It is developed through the participation of the different schools of the country in the broadcast programmes. Through such participation the schools agree to observe the norms that regulate each programme, especially participation programmes.

8. Cooperation with educational authorities

The cooperation between the Department and the Ministry of Science and Education is limited to the awarding of prizes for school participation programmes, such as "Misión Rescate" (Rescue Mission), "Legión verde" (Green Legion), "Torneo Nacional Radio Escolar" (National School Radio Tournament).

9. Recording rights

No statement

10. Research

At the moment, no regular or occasional studies concerning the educational radio programmes are carried out.

Sweden

Sveriges Radio Ab. (SR)

Oxenstiernsgatan 20
S-10510 Stockholm
Tel.: (08) 63 10 00
Telex: 10 000 SRCENT S

1. Beginning of school radio broadcasts

In Sweden school radio broadcasts started on an experimental basis in 1926 and 1928. The first school radio term on a more regular basis was the spring term of 1929.

2. Broadcasting times

Since the middle of the Fifties school radio has disposed of the second radio channel between 9 a.m. and 2 p.m. Although not all these hours are filled up the time is nevertheless at the disposal of school radio.

3. Staff

The staff includes 33 school radio producers; besides, there are programme assistants, editors, administrators and secretaries.

4. Target groups

The target groups are all levels of the nine year compulsory school and also the senior high school.

5. Subjects

In principle, we make programmes on all school subjects, however, not all subjects can be covered at the same time in each term. In school radio there is a certain stress on foreign language programmes, news and civics. All school programmes are considered to be within the frame-work of the national curriculum. That frame-work is so wide, however, that more or less any subject could, with a reasonable approach, be considered as "on curriculum".

6. Cooperation between school radio and school television

School radio and school television are under the same cover in our organization. Thus there is complete co-planning of the whole output, and we produce a large number of multi-media projects where radio, television, printed material, slides etc. are components of one and the same project.

7. Cooperation with schools

School radio cooperates intensively with the school world, and we must limit ourselves here to the following features:

a) Sveriges Radio has a school broadcasting committee. It is appointed by the Director General and is composed of representatives of the National Board of Education, various teachers' organizations, the two existing pupils' organizations, and others. The committee meets two or three times per year.

b) It is part of the annual programme-planning machinery to send out a letter through the National Board of Education to a large number of educational institutions, such as regional boards of education, teacher training colleges, teachers' and pupils' organizations, a number of schools and a few other organizations. The planning is then based on the answers received from all these organizations and institutions which indicate what kind of help is needed in the shape of radio and television programmes and printed material as well.

c) We also try to take part in as many teachers' conferences as we can find time to. We make between 150 and 200 journeys to such conferences per year.

d) Furthermore, representatives of the school world are invited to so-called "open line conferences" where Broadcasting House in Stockholm is connected with the SR studios all over the country. The guests in the studios can discuss with representatives of the school broadcasting department in Stockholm over open radio lines.

e) There is also a teachers' magazine sent out free of charge to all teachers who ask for it; for practically every programme project there are teachers' guidelines.

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8. Cooperation with educational authorities

The cooperation with the National Board of Education is based on an agreement between Sveriges Radio and the Board. According to that agreement there should be cooperation in the planning of school broadcasts, whereas the production of the programme is solely the business of Sveriges Radio. At the planning meeting of the departments a liaison officer from the National Board of Education is present, however, he has no right to veto the decisions. At the meeting he has the same status as the members of the programme department.

9. Recording rights

There are more than 100 audiovisual centres in the country where all school radio programmes are recorded off the air. From those AV centres the teachers can borrow copies of the radio programmes, which, according to the Swedish law, can be kept at the centres for three years from the date of the broadcast.

10. Research

The department has a small research group where some of the programmes are pre-tested before and evaluated after the broadcasts. The group also measures the number of classes using the programmes.

The Swedish Educational Broadcasting Company

The Swedish Educational Broadcasting Company, which started its activities on January 1, 1978, is a new broadcasting organization – like the Swedish Local Radio a daughter company of Sveriges Radio. It produces and broadcasts radio and television programmes on all levels of education: preschool, school, university and adult education.

The foundation of the Swedish Educational Broadcasting Company is based upon a decision of the Swedish Riksdag (parliament) made in December 1976. It joins together the two organizations which had hitherto produced educational programmes. The SR Educational Programme Unit which had been in charge of school radio and school television programmes, to a certain extent also of adult education programmes, and the TRU (Television and Radio in Education), a governmental organization which had mainly produced preschool and adult education programmes.

A programme from the Swedish Educational Broadcasting Company is always meant to function in a certain educational context, to contribute that which cannot be provided by other media, to stimulate discussion and further study. The programmes do not differ in form from the general SR or Local Radio programmes, the difference is rather that programmes from the Swedish Educational Broadcasting Company have explicit pedagogical objectives.

The Educational Broadcasting Company has unique possibilities to renew its products continuously, to keep them up to date in form and content, to react immediately on what happens at home and abroad. As compared with other educational media production time is short, and broadcasting means speed and full coverage in distribution.

These assets are combined with a wish to keep programmes available for a longer period. Therefore, they are recorded off the air at AV centres all over the country. The programmes and the accompanying printed material can be used again and again and whenever wanted, as schools, adult education associations etc. can borrow copies in the form of sound tapes or cassettes, video-cassettes, and in some cases also films from those AV centres. In principle, all programmes from the Swedish Educational Broadcasting Company should be cleared of copyright, so that they can be copied off the air.

The programme output of the Educational Broadcasting Company is subject to the Broadcasting Law, the Broadcasting Liability Law, and the SR Charter. This means – inter alia – that the Educational Broadcasting Company is independent of authorities, organizations and pressure groups. It is under the cover of this independence that the Educational Broadcasting Company cooperates with other educational bodies, and in that cooperation between equal partners the educational needs will be mapped out, the products be used, and the result of projects be evaluated. Part of the job of the Educational Broadcasting Company is also the facilitating of the utilization of radio and TV programmes in school classes and study circles.

In its decision the Riksdag set down certain guidelines for the work of the new company. Those guidelines stress in particular the need for programmes for preschool and adult education and for underprivileged groups in society, such as those with unsufficient formal education, physically and mentally handicapped people, and immigrants. It was also underlined that the activities of the company should be locally well founded. Programmes should be produced and broadcast locally (regionally) and in direct cooperation with local (regional) educational bodies.

The Educational Broadcasting Company is financed with state grants and does not operate on licence fees as general broadcasting in Sweden does. The staffs of TRU and the SR Educational Programme Unit have been offered jobs in the new company whose staff therefore comprises 330 people. Besides the programme producing departments there is a publications department.

It has been decided that the new building for the Educational Broadcasting Company will be erected at Tyresö, south of Stockholm. This will take some years, however, and until then the office adresses will be:
Strindbergsgatan 26, Stockholm (phone 63 10 40)
Stockholmsvägen 30, Stocksund (phone 85 04 20)
Postal adress: Sveriges Utbildningsradio, S-115 80 Stockholm

Switzerland

Schweizerische Radio- und Fernsehgesellschaft (SRG) Radio- und Fernsehgesellschaft der deutschen und der räto-romanischen Schweiz (RDRS)

Radio- und Fernsehdirektion
Hagenholzstraße 81
CH-8050 Zürich
Tel.: (01) 50 66 11
Telex: 58 682

Programmdirektion Radio DRS
Bruderholzallee 172
Postfach 47
CH-4024 Basel
Tel.: (061) 34 62 20
Telex: 63 382

1. Beginning of school radio broadcasts

Swiss school radio can look back over a history of more than 40 years: the first broadcasts were transmitted in 1930.

2. Broadcasting times

At present the school radio broadcasts of Radio DRS are transmitted from Monday to Friday at 9.05 hrs on the 2nd Channel and on VHF and last about 30 minutes. So each day 30 minutes broadcasting time are available and each week 2 hours 30 minutes.
There is an increasing need for 20-minute broadcasts; the school radio programme therefore contains so-called short broadcasts (15 to 20 minutes) in blocks of two.

3. Staff

Radio DRS produces its school radio broadcasts in three production centres in Basle, Berne and Zurich. The broadcasts are prepared by three working groups consisting of six education experts (who must also be active teachers) and one representative of the "Word"-Department (school radio editor). In particular they suggest themes, look for and find certain authors and edit the texts for broadcasting. The school radio editors are responsible for the realization: apart from their editing activities they may also be producers. In addition, they have one or two free-lance contributors (reporters, directors) at their disposal to whom they may delegate certain work.

4. Target groups

The target groups are particularly the classes of the lower, middle and upper grades (1st to 9th school years) and vocational and further education schools. Broadcasts for grammar schools are rarely included in the programme since there is little need for them at this level.
Another way of popularizing school radio appears to be the publication of tapes and cassettes by the TR-Verlagsunion. Experiments along these lines with individual programmes which may also interest listeners outside the schools are under way.

5. Subjects

As the Swiss schools present a very varied pattern – in the various cantons the curricula and lessons are quite different in some cases – it is not very easy for school

radio to provide material which is valid in all the cantons.
The main emphasis is placed on the subjects language, literature, history, natural history, geography, technology, environment, civics, musical education and art education (studying pictures). In addition, general themes dealing with life are provided. In school radio the programmes have mainly been provided as enrichment with a more or less chance selection of themes, sometimes inspired by current events.
Extra-curricular subjects are rarely included in the programme, since so far they were used in practical lessons by only very few listeners.

6. Cooperation between school radio and school television

At present cooperation between school radio and school television is only in its initial stages, but in this area the aim is increased coordination and, as far as possible, project-related cooperation.

7. Cooperation with schools and
8. Cooperation with educational authorities

Teachers who are employed in schools are active members of the working groups which prepare productions (cf. point 3).
Because of the multi-language situation in Switzerland one national and four regional School Radio Commissions provide for the needs of school radio:

- The National School Radio Commission of the SRG with 13 members;
- The Regional School Radio Commission I of the German-speaking parts of Switzerland;
- The Regional School Radio Commission II of the French-speaking parts of Switzerland;
- The Regional School Radio Commission III of the Italian-speaking parts of Switzerland;
- The Regional School Radio Commission IV of the Rhaeto-Romanish-speaking parts of Switzerland.

The Regional School Radio Commission I of the German-speaking parts of Switzerland (whose organization and method of working are largely the same as that in other parts of the country) is composed of:

- the head of the "Word"-Department, as deputy of the regional Radio Director;
- the editors responsible in the studio for the school radio broadcasts (three altogether), of whom at least one should be present;
- the educational experts from the working groups (cf. point 3), of whom, however, no more than three from each working group should attend the regional meetings;
- a representative of the Regional School Radio Commission I;
- the editor of the journal "Schweizer Schulfunk";
- from case to case outside experts can be called in to give advice.

In 1975 negotiations were opened with the Confederate Educational Directors Conference, which is composed of representatives of the authorities responsible for school affairs. The aim of these talks is more cooperation both in selecting the material and in financing the broadcasts as well as a basic integration of the school radio programmes in the curricula.

9. Recording rights

Recording rights and modalities are not yet settled. The new copyright law at present being worked out is meant to finally clear up the situation. According to the old law, recording such as made every day at the various central lending offices and at the schools, would not be allowed, but so far there have been no practical difficulties. The aim is a solution which allows recordings for school purposes and the indefinite retention of the copies.

10. Research

Apart from individual responses from the listening audience the working groups which prepare the school radio broadcasts rely on the so-called report cards. These are enclosed with the tapes lent to the schools by certain lending centres. The cards are filled in by the teachers and sent back to the local working groups. At present no other studies exist.

Schweizerische Radio- und Fernsehgesellschaft (SRG) Società cooperativa per la radio-televisione nella Svizzera Italiana (CORSI)

Casella postale
CH-6903 Lugano-Besso
Tel.: (091) 57 20 21
Telex: 79 249

1. Beginning of school radio broadcasts

School radio broadcasts were begun in 1964.

2. Broadcasting times

At present school radio is allocated an average of two hours a week.

3. Staff

There is a staff of three as well as 12 to 15 advisers.

4. Target groups

The target groups are the pupils at the compulsory schools in the canton of Tessin.

5. Subjects

All school subjects are dealt with, such as: mathematics, geography, history, biology, music, law, languages, etc. There are no extra-curricular programmes.

6. Cooperation between school radio and school television

Cooperation takes place only in the case of language courses.

7. Cooperation with schools

The Regional School Radio Commission III in the Italian-speaking parts of Switzerland (Canton School Radio and School Television Commission) consists of representatives of sound radio and television (cf. report of the SRG/DRS, point 7).

8. Cooperation with educational authorities

The Canton Commission is responsible for the pedagogical conception of the programmes. The radio station is in charge of their realization.

9. Recording rights

There are not yet any clear-cut laws (cf. report of the SRG/DRS, point 9).

10. Research

The Canton Commission for School Radio and School Television carries out surveys regularly.

Schweizerische Radio- und Fernsehgesellschaft (SRG)
Societé de Radiodiffusion et de Télévision de la Suisse Romande (SRTR)

Maison de la Radio
CH-1010 Lausanne
Tel.: (021) 21 71 11
Telex: 21 130

1. Beginning of school radio broadcasts

School radio began its broadcasting before the war.

2. Broadcasting times

In the last few years school radio has been allocated five half hours a week, which are transmitted over Radio Suisse Romande II (VHF). It should be mentioned that these broadcasts are affiliated to the 'Télédiffusion' Company.

3. Staff

The core of the staff is one producer and one secretary. The team is supported by about 20 free-lance contributors.

4. Target groups

The target groups aimed at by school broadcasts are divided up into four age groups:
6– 8 year-olds
8–10 year-olds
10–13 year-olds
13–16 year-olds
In addition, since autumn 1976 one-hour discussions have been broadcast each week entitled "The Open Door to the School", the aim of which is to establish contact between parents and educators.

5. Subjects

School radio broadcasts are mainly exercises on French and instruction in German. Outside the curriculum topical broadcasts are provided, introducing music, stories, reports, and descriptions from real life.
All these broadcasts are produced in cooperation with the educational authorities (Départements de l'Instruction Publique) in the various French-speaking cantons.

6. Cooperation between school radio and school television

For about one year there has been cooperation between school radio and school television on the basis of a mixed commission of the sound radio and television departments and the educational authorities. The commission is responsible for overseeing the two media, but production activities are separate.

7. Cooperation with schools and
8. Cooperation with educational authorities

Cooperation between the educational authorities and school radio takes the form of a working group for production of the commission mentioned under point 6. This working group works closely together with the professional group of teachers and school radio editors.
In Switzerland there is no Ministry of Education. As far as the French-speaking part of Switzerland is concerned there exist six canton educational authorities, one for each canton.

9. Recording rights

The question of recording rights is being examined at present, since the Swiss laws on copyright are being revised. (Cf. the report of the SRG/DRS, point 9.)

10. Research

Studies on school radio are periodically carried out as part of general studies on the programmes and occasionally through contacts with schools.

Turkey

Türkiye Radyo Televizyon Kurumu (TRT)

Nevzat Tandogan Caddesi 2
Kavaklidere
Ankara
Tel.: 18 11 30
Telex: 42 374

1. Beginning of school radio broadcasts

TRT began school radio broadcasts in 1963.

2. Broadcasting times

School radio programmes are broadcast during the school year from September/October to May, every weekday from 11.00 to 12.00 hrs and from 15.00 to 16.00 hrs on the 1st Channel, i. e. two hours a day.

3. Staff

One producer only is responsible for the school radio programmes.

4. Target groups

The target groups are children in the 4th and 5th classes of primary school and pupils in the intermediate and grammar schools.

5. Subjects

Only broadcasts are produced which relate to the general curricula laid down by the educational authorities.

6. Cooperation between school radio and school television

In our organization the school radio and school television departments do not cooperate.

7. Cooperation with schools

TRT has no connections with the schools.

8. Cooperation with the educational authorities

There is cooperation with the Ministry of Education in as far as the programmes are produced on the curricula laid down. To this end a plan has been worked out by the Ministry.

9. Recording rights

The Ministry has the copyright for recordings.

10. Research

So far no studies have been carried out.

Yugoslavia

Jugoslovenska Radiotelevizija (JRT)

Borisa Kidriča 70/I
Beograd
Tel.: 433-647, 433-639
Telex: 11-469 yu jurate

Preliminary remarks

Yugoslav Radio and Television is an association of 8 main radio and television organizations (Beograd, Ljubljana, Novi Sad, Pristina, Sarajevo, Skopje, Titograd – the latter not having its own school programme but transmitting the programme of Radio Beograd – and Zagreb).

There exists a very close cooperation among school radio departments of all Yugoslav radio stations both on bilateral and Yugoslav levels. About 20⁰/₀ of the total school radio programme of each radio station consists of programmes taken by choice from other school radio departments.

All school radio departments actively participate in the realization of joint series with topics such as: "Post-war literature of peoples and nationalities of Yugoslavia", "Literature between the two wars", "National liberation war combatants tell their stories", "At the thresholds of folk music treasuries", "Let us get acquainted with our village", and broadcast them during the previously determined time periods. Close cooperation

also exists in the realization of foreign language series for the needs of several school radio departments.
At regular meetings of editors of school radio departments of all Yugoslav radio stations experiences and ideas regarding different questions of programme and organizational matters are being exchanged.
Up to now three symposiums of great interest to all radio stations were organized about school radio. The subject of the third symposium was: The Role of Educational Radio in the Transformation of Educational Systems and of the Family.

Jugoslovenska Radiotelevizija (JRT, Radiotelevizija Beograd

Hilendarska 2
YU-11000 Beograd
Tel.: 347-521
Telex: 11 488

1. Beginning of school radio broadcasts

School radio broadcasts in Radio Belgrade began in 1953. Today school radio represents part of the educational programme comprising both children's programmes and programmes for adult education.

2. Broadcasting times

Broadcasts for pupils begin at 8.00 hrs in the morning, five times a week. They last 30 to 40 minutes and consist of segments of 10 to 20 minutes length.

3. Staff

No statement.

4. Target groups

The programmes are based on educational contents on the elementary school level and the intermediary vocational school level.

5. Subjects

In selecting the themes radio-specific presentations and essential social needs are taken into consideration. The largest part of the broadcasting time is dedicated to contents whose essence can best be expressed by words and sounds. However, other themes are also introduced as long as they do not require visualization. Thus, nearly all teaching subjects are represented by school radio, except painting. The programme is planned regardless of the fact that a theme may not be explicitely stated in the school curriculum if it contributes to complement and animate the school curriculum as well as the general upbringing and education of a free, creative personality of our self-managing, socialistic society.

6. Cooperation between school radio and school television

Occasionally there is a cooperation with the school programme of Television Belgrade.

7. Cooperation with schools

There is no regular and systematic cooperation with the schools. Usually, the cooperation is achieved through various actions, series or participation in actions organized by other social bodies. On such occasions, the response of schools and pupils is remarkable. A publication containing semi-annual plans of broadcasts, which is sent to schools and interested individuals free of charge, represents a constant link with the audience.

8. Cooperation with educational authorities

Our cooperation with educational bodies is occasional, insufficiently systematic and mainly of a stimulating and animating character. School radio plans its programme, whereas the Programme Council, educational and other social bodies have an advisory function only.

9. Recording rights

Recording rights and subsequent uses of the programmes are not sufficiently regulated in the legal sense. The broadcasts are usually offered free of charge; they are recorded when broadcast and later planned to fit into the teaching and so-called "out-of-school" activities of the pupils.

10. Research

Programme studies are done from time to time, however, their results cannot be generalized, since the programmes are rather specific.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Ljubljana

Tavcarijeva 17
YU-61000 Ljubljana
Tel.: 311–922
Telex: 31 118

1. Beginning of school radio broadcasts

Regular school radio programmes began in September 1947. First attempts at it were made even before World War II.

2. Broadcasting times

We broadcast school programmes three times a week on Programme II, first showing, and repetition for different age groups.

3. Staff

There are six staff members, four of which are editors, i. e. producers.

4. Target groups

The target groups are:

lower school level	(7 to 9 year-olds)
intermediary school level	(9 to 13 year-olds)
higher school level	(13 to 15 year-olds)
secondary school level	(15 to 19 year-olds)

5. Subjects

We cover the following subjects of the school curriculum: Slovenian language and literature, history, biology, music, geography, social-moral education. Apart from this, there is a special programme entitled "Usual talks" (dealing with current problems in youth upbringing etc.).
The secondary school curriculum is covered by: self-management and elements of Marxism, series on Yugoslav folk creativity (music, literature, etc.).
All broadcasts are in accordance with the school curriculum, but they are all a little ahead of it.

6. Cooperation between school radio and school television

School radio and school television do not plan on joint programmes.

7. Cooperation with schools

The school radio department publishes a booklet twice a year with the contents of all broadcasts; it is meant for school teachers. The publication is distributed to all schools free of charge. Each contains printed cards on which teachers write their suggestions and which are then sent to the department.

8. Cooperation with educational authorities

For each subject field there is a group of experts which prepares the programmes under the supervision of the school radio department. The programmes are agreed upon by the Council consisting of representatives of the highest educational institutions of the Republic and the Secretariat for Education.

9. Recording rights

The best programmes are recorded on cassette tapes and sold in bookstores.

10. Research

The Department for Programme Study makes an occasional analysis of the popularity of programmes in schools and elsewhere.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Novi Sad

Zarka Zrenjanina 3
YU-21000 Novi Sad
Tel.: 57-033
Telex: 14 127

1. Beginning of school radio broadcasts

Radio Novi Sad began school broadcasting in 1954.

2. Broadcasting times

School broadcasts are transmitted every day, except Saturdays and Sundays, at 9.02 hrs and 14.02 hrs (repeat).

3. Staff

The school broadcasting department has a staff of six.

4. Target groups

The target groups are the primary and intermediate schools.

5. Subjects

The broadcasts mainly deal with the following subjects according to the curriculum: Hungarian and Serbo-Croat for the lower and upper classes (Hungarian also optional), history, geography, biology, music, training for form masters, moral education.

6. Cooperation between school radio and school television

Unfortunately there has been no cooperation between school radio and school television so far.

7. Cooperation with schools

The school broadcasting department has an extensive correspondence with its listeners, it carries out visits to schools, has advisory function and organizes courses for individual subjects of instruction. The cooperation with teachers' training colleges should also be mentioned.

8. Cooperation with educational authorities

The regional Secretariat for Education does not interfere with the programmes of the school broadcasting department. Decisions affecting the programmes are taken by the social organs and a programme council working in the department.

9. Recording rights

The programmes may be recorded off the air.

10. Research

Public opinion polls are occasionally carried out, as, for example, in the years 1962, 1964 and 1972.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Priština

Zejnel Ajdina 12
YU-38000 Priština
Tel.: 26-255
Telex: 18 134

1. Beginning of school radio broadcasts

Our radio station began to broadcast school programmes in 1959.

2. Broadcasting times

School programmes are broadcast from 8.05 to 8.30 hrs.

3. Staff

There are three staff members in all.

4. Target groups

The programme is meant for elementary schoolchildren only.

5. Subjects

The following subjects of the school curriculum are covered by school radio: Modern Albanian language, French, English, Albanian literature, Yugoslav literature, a selection of world literature, natural and social science, biology, geography, history (national, Yugoslav and world history), music, history of art, the ABC of Marxism. We also offer educational reports and travel reports.

6. Cooperation between school radio and school television

Priština Television does not yet have a school programme.

7. Cooperation with schools

The cooperation between the school radio department and the schools is organized through occasional contacts with teachers.

8. Cooperation with educational authorities

The cooperation between the school radio department and the Secretariat for Education is being done through the department's council.

9. Recording rights

The listeners are at liberty (and advised) to record the broadcasts independently or in groups in order to use them for educational purposes.

10. Research

Programme studies are being done from time to time.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Sarajevo

Danijela Ozme 7
YU-71000 Sarajevo
Tel.: 34-40 00
Telex: 41 224

1. Beginning of school radio broadcasts

Radio Sarajevo started to broadcast school programmes in 1953. Since then the programmes have changed their contents, but the main goal, that of enriching the school curriculum and making it more attractive, has remained the same. At the same time, new forms were sought for better employment of radiophonic possibilities and expression.

2. Broadcasting times

School radio programmes are broadcast every day from 8.00 to 8.40 hrs, except Sunday. Unfortunately, there are no afternoon broadcasts so that the pupils attending school in the morning are not able to follow the programme, while those who go to school in the afternoon can listen to the programmes regularly (our schools are attended in two shifts – in the morning and in the afternoon).

3. Staff

Seven journalists are members of the department's staff, in addition to a considerable number of collaborators. The editor of the school radio is at the same time the editor of the complete educational programme (children's programmes, school radio, and adult programmes).

4. Target groups

School radio programmes are meant for elementary and secondary school pupils.

5. Subjects

Having in mind the fact that school radio broadcasts last only 40 minutes, we are not able to cover the complete school curriculum. Therefore, priority is given to the subjects which most easily can be presented by sound. At the moment, we broadcast series of programmes on literature, natural sciences, languages, social sciences and music.
Steps have been taken to reorganize school radio and to enlarge its programmes so that radio can be included in the complete school curriculum of the Republic.

6. Cooperation between school radio and school television

Cooperation between school radio and school television is achieved mainly through broadcasts of closing ceremonies of certain initiatives organized by school radio.

7. Cooperation with schools

Cooperation between the school radio department and the schools in the Republic exists, but it is not satisfactory.

8. Cooperation with educational authorities

In its work, the school radio cooperates mainly with educational institutions and communities of interest in culture and education. In collaboration with representatives of these institutions regular analyses of programmes are made.

9. Recording rights

No statement

10. Research

We usually make audience research in schools every year on the popularity and the use of school radio, but since this year's research is not finished yet we are not able to supply the results.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Skopje

Dolno Nerezi
YU-91000 Skopje
Tel.: 50-205
Telex: 51 157

1. Beginning of school radio broadcasts

School radio broadcasts started in 1955.

2. Broadcasting times

The school programme is broadcast every day, except Saturdays and Sundays, at 8.02 hrs on Programme I and repeated on the same day on Programme II at 15.30 hrs. The broadcasts consist of three separate programmes lasting 10 minutes each (30 minutes in all).

3. Staff

There are five staff members, one of them being the editor of the school radio programme. This group is part of the General Education Department which has its own editor (he also observes, corrects and approves the school radio programmes).

4. Target groups

School radio programmes are meant for elementary school pupils, intermediary vocational school and high school students.

5. Subjects

We cover all subjects mentioned by the school curriculum, and also offer new and current topics suitable for teaching but not yet in textbooks.

6. Cooperation between school radio and school television

Although there were some talks about it, the cooperation between school radio and television has not yet been established.

7. Cooperation with schools

We provide schools with our published programmes containing titles of all broadcasts and – on the back of the sheet – a short information on every series of broadcasts.

8. Cooperation with educational authorities

School radio has its administrative body – the Council of School Radio – while, apart from school teachers and education advisors from education administration, the representatives of the Republic Secretariat for Science, Education and Culture take part in its work. The cooperation between the school radio department and the Secretariat for Science, Education and Culture for the time being is manifested in that.

9. Recording rights

The recording rights and subsequent uses do not fall under any specific norms. The station is not able to provide recording services to its listeners, therefore, we advise them to make direct recordings of the programmes (or with the assistance of local radio stations). Most of the schools do just this.

10. Research

Programme studies are being done occasionally.

Jugoslovenska Radiotelevizija (JRT)
Radiotelevizija Zagreb

Jurisićeva 4
YU-41000 Zagreb
Tel.: 418-011
Telex: 21 154

1. Beginning of school radio broadcasts

Radio Zagreb began broadcasting school programmes in 1950.

2. Broadcasting times

The school programme is broadcast from 8.05 to 9.00 and from 13.00 to 14.00 hrs.

3. Staff

The school radio department consists of six members.

4. Target groups

The programme is meant for secondary school level and upwards.

5. Subjects

The following subjects are covered: mother tongue, history, geography, foreign languages – all covered by the school curriculum;
modern sociology, technical culture, modern medicine, etc. – not covered by the school curriculum.

6. Cooperation between school radio and school television

Occasionally, there are joint programmes, mainly of foreign languages.

7. Cooperation with schools

The cooperation between the school radio department and the schools is organized through written and personal contacts as well as through seminars for school teachers.

8. Cooperation with educational authorities

The cooperation between the school radio department and the Secretariat for Education is satisfactory.

9. Recording rights

All recording expenses are covered by the school radio.

10. Research

Programme studies are done every two years.

Donald Grattan

The situation of school radio:
Conceptions, working methods, trends – Questions for the panel members

Educational Broadcasting has a history of just over fifty years. It is now regarded as one aspect of educational technology – a phrase which embraces systems in which a variety of methods and media are used to achieve educational and training objectives.

In many European countries educational broadcasting started with school radio, sometimes on a regional or local basis. School radio was joined, often years later, by school television. Then for some, school broadcasting was followed by educational broadcasting for adults – as a contribution towards life-long education, recurrent education, continuing education or whatever term you favour. This development has led to the emergence of distance and open learning systems in which broadcasting has a significant role to play. In some ways, because of this European concern with the continuing education of adults, which will certainly be a major element in education in the next decade, the focus of attention has moved in educational broadcasting away from the child at school to the adult learning either at home or in any one of a variety of group learning situations. So the time is right for a reconsideration of the particular characteristics and strength of radio when used in collaboration with other media to make a contribution to school and schooling and, importantly, to teachers and parents.

Of course, we are not operating in a homogeneous society or culture. Our societies are torn by conflicting forces. The upheavals of the '60s shook many of our establishments to their foundations, but perhaps fortunately in schools the steps towards liberalism of teaching methods from traditional and authoritarian patterns were more careful.

But our schools are nevertheless faced with many questions:

- In terms of basic skills, what will our societies demand – will it be formal qualifications or training in how to use the means of communications for human purposes?
- How do we see the role of the teacher – as a field commander or as a friendly cooperator in the activities of the pupils?
- What is the role of the curriculum – a system to be rigorously followed, or a set of ideas for experimentation?

- What is the role of the parent – as a cooperating person within the learning process, or as a controller of the peace?

So many of our schools in Europe are in a state of dynamic change, and the question often is whether school broadcasting has any role to play in this or not – in particular, has school radio a significant part as it operates in a climate in which small group learning has developed, and in which many other technical resources such as the audio cassette have begun to play a significant role.

From these considerations the following set of questions has been derived. They were designed to serve as a starting point for a discussion among European experts on school radio, representing broadcasting stations of widely different organizational backgrounds. When I met with these experts for a preparatory talk we agreed that neither we nor the members of the seminar could possibly provide answers within a three-hour discussion, but we also agreed that these questions were those which should remain at the front of our minds throughout the conference. Here, then, are the seven problem points to which we attempted to address ourselves:

1. In many European countries school television has come to be regarded in the last two decades as a significant force in education. Where school radio was already in existence there has often been a reassessment of the objectives and purposes of the school radio provision. At the same time in many schools there has been a movement from teacher-dominated learning to child-centred learning.

- What significant changes have you detected in your organization's policy and output as a result of these and other influences, and what further changes do you anticipate in the next ten years?
- Are these changes due in the main to curricula change or to methodology considerations either in the classroom or in the distribution of learning materials?

2. How does your organization, together with your advisers, apportion the roles of television, radio, radiovision and print in terms of broadcasting to schools?

- Do children and teachers accept radio in a "television age"? Will the audience look towards radio and be satisfied? Has radio within itself resources to provide materials which will motivate and engage the audience?
- What criteria, if any, do you use in apportioning resources to meet learning objectives via school radio? Are these criteria largely educational or are they affected by organizational and logistical requirements?
- Does the cost-effectiveness and efficiency of learning systems enter into your discussions?

3. The teacher as the intermediary in the learning process

- What steps does your organization, or those cooperating with it, take to ensure that teachers and lecturers are fully aware of the potential of educational radio?
- To what extent do broadcasting organizations have a responsibility for the training of teachers, either initially or in-service, in terms of the use of the media and in particular in regard to the imaginative use of school radio?

4. Child and student-centred learning

Classroom methods have changed dramatically in some countries, but at all age levels there has been an emergence of small group activity, individualist learning and open learning systems.

- At the primary level, is the broadcasting method appropriate for radio and radiovision?
- What is the influence of the idea of flexible resources upon the use by teachers of radio-originated material in the primary school?
- At the upper secondary school level and in the education of young adults, does the development of open learning systems have any implication for the role of school radio?

5. Multi-media

It is generally agreed that school broadcasts should be accompanied by print material either for the child or the teacher or both. Some school radio programmes (or cassettes) are designed in integration with a wide range of audio-vision material.

- Has your organization developed a positive policy in relation to print material which accompanies school radio broadcasts? Have you developed criteria from your experience in schools, and if so what are these criteria?
- What significant developments have you seen emerge in the last ten years in terms of the design of print material to accompany radio broadcasts and vice versa? Have you developed a policy in relation to the lead function?
- If school radio (and subsequent distribution by cassettes) is a significant medium, then there will be examples in which the radio exists almost on its own without the support of print. Have you any examples of this?

6. Distribution systems

The increasingly wide-scale availability in most countries of the audio-cassette recorder and replay devices has led to flexibility in the availability of learning materials. Some have argued that this change makes redundant and wasteful the use of broadcasting channels for the distribution of "school radio".

- Is there now any specific role which justifies the distribution by radio broadcasts of "radio material" produced for schools?
- Does flexible resource-based technology suggest that independent educational publishers should now produce and distribute cassettes? If that is the case, what is the role for the broadcasting organizations?

7. Scale of provision

Some countries are now developing local and regional school broadcasting services in addition to a network provision.

- Does your organization have a policy in relation to the provision of school broadcasting at national and local levels? Are differing finance methods involved? Do the local collaborative procedures vary markedly from those at national level?

Rainald Merkert

The situation of school radio:
An attempt to evaluate the panel discussion

At the beginning of the conference, the organizers invited a panel of experts onto the podium to introduce the subject matter by discussing a few basic problems and outlining solutions to them.

Under the chairmanship of *Donald Grattan*, Controller, Educational Broadcasting at the BBC, the discussion group comprised *Dr. Charles Armour*, head of School Radio at the BBC; *Janoz Dokler* from Yugoslav School Radio, Ljubliana; *Harald Engberg-Pedersen*, head of Danish School Radio; *Arlette Grandmaître* from the French Centre National de la Documentation Pédagogique; *Dr. Klaus Klöckner*, head of School Radio, Hessischer Rundfunk; *Bram Kruikemeijer*, head of Dutch School Radio and School Television NCRV, Hilversum; *Stelios Sycallides*, representative of the Cypriot Ministry of Education, responsible for radio and television.

The task of the panel was not to discuss the questions posed by the chairman in detail and then offer perfect solutions acceptable to all concerned; it is quite clear that this would have been rather unrealistic. Their task was primarily to examine conceptions, working methods and trends within school radio broadcasting in Europe. The organizers proceeded from the fact that there is no such thing as a uniform school radio in Europe; even in the FRG each separate broadcasting station – including RIAS Berlin, but excluding the Südwestfunk – has its own school radio service. Accordingly, it was considered fitting for the participants at the conference to learn something about the concrete structure and operation of school radio services in different countries. It was, of course, also considered necessary for an international comparison to take into account the diversity of both school radio broadcasting and the respective school systems, because both are important for the concrete programmes offered by school radio.

The agenda, drawn up by the chairman and discussed with the panel members in advance, was eventually considered to be too extensive. Accordingly, the chairman cut the seven questions or groups of questions originally scheduled down to five.

I

At the beginning of the panel discussion, the chairman stated that the object was not to develop impressive theoretical models but to discuss and compare the experience gained in school radio broadcasting and clarify misgivings about future developments. He also explained how this objective was to be achieved: five questions or groups of related questions were to be posed and each of the chairman's fellow members of the panel was to have about 15 minutes to explain his views.

1. What significant changes have taken place in the past 10 years as a result of competition from television and other media with respect to broadcasting policy and to the attitude of the children, and how has school radio reacted to this?

School radio broadcasting, it was explained, has existed in France for 25 years, during which time changes have of course taken place, and not only due to the influence of television. Special reference was made to two changes. The object of school radio broadcasting today no longer consists in supplying "general teacher assistance", but to give new impulses and to promote creativity. This new aim is in step with the changed methods and also with a quantitative reduction in broadcasting time from 25 hours to 12 hours (1977/78). This reduction, started in 1973, had been preceded by a steady growth in broadcasting time between 1952 and 1973.

When asked for their opinion about school radio broadcasts and television programmes, Danish school classes generally said that television was interesting and stimulated discussion whereas radio was rather boring. One reaction of school radio to this criticism was to broadcast shorter programmes and cut out lengthy series of programmes.

This trend towards shorter programmes and shorter series, however, is also being pursued by school television, at least in the FRG, and moreover, the two media should not be viewed solely from the aspect of competition and diversity.

School television and other media have, for instance, made quite a decisive contribution towards making wider sections of the public and educationists aware of the importance of using the media, and school radio broadcasting also profits from this. The representative of the FRG on the panel, who had raised this point, remarked that the question of financing had also become relevant as a result of this development. This was an aspect touched upon numerous times during the conference, but no one took it up in detail.

How school radio broadcasting has reacted to developments over the past decade is a question which, as far as the FRG is concerned, cannot be answered briefly because each broadcasting station has its own school radio department. Not only is there a considerable variation from station to station in the weekly volume of broadcasting time and the number of programme editors and staff, we can also observe a continuous development in organization and policy in some cases as against interruptions and explicit reorientation in others. The Süddeutscher Rundfunk, for example, has been broadcasting a programme since autumn 1976 which is considered explicitly to be a response to recent developments in schools and in the broadcasting organizations; it has a more marked orientation to the pedagogic than to the didactic tasks of the school, and is based more on journalistic considerations than on advance decisions relating to curricula and teaching methods (see page 33).

In view of the competition from school television, efforts are being made in Britain to exploit the specific possibilities of radio; for example, by offering a wide range of programmes for musical education. According to reports, intensive use is actually being made of these programmes, especially in primary schools. On the other hand, competition from television has resulted in a trend in school radio to supply extensive accompanying material; in the meantime, however, this has caused people to ask if this is not a form of "escape" into accompanying material induced by an underrating of the medium radio, and if a return to "pure" radio would not be more appropriate.

An interesting answer to this question was given by the delegate from Cyprus. He reported that in his country school television is older than school radio. Cypriot teachers are more interested in television than in radio, but since electricity is not always readily available on the island, radio programmes – which can be received by battery or transistor radios – also get their chance. From this he concluded that the crucial question is what teachers and pupils are interested in and what they are prepared to accept. In his opinion, the more frequently discussed question as to what the different media can achieve is secondary. He also took a pragmatic view of the specific qualities of radio broadcasting: it is more flexible than television, programmes are easier to record on tape, and tapes are cheaper.

2. Do teachers and pupils accept school radio in a "television age"? Has radio been assigned specific tasks, e. g. to promote motivation and commitment, and what criteria exist for the specific role of radio?

Just how little reliable scientific information exists on whether teachers and pupils accept school radio broadcasting and on how they actually make use of it was a topic discussed by *Dr. Tamás Szecskö* in a paper read on the last day of the conference. It was hardly surprising, therefore, that besides a few accounts of personal experience the opening discussion was largely characterized by an expression of opinions. The participants referred, for instance, to those arguments which had once been raised against the introduction of school television: Education aims at the promotion of abstract thinking, but the visualization by television conflicts with this aim; fantasy and mental perception are promoted better by radio than television, which supplies both sound and picture simultaneously. To illustrate this point, reference was made to a five-year-old Yugoslav child who said that he preferred radio to television "because of the better picture". This partial superiority of radio, it was said, must be exploited in school radio broadcasting.

We were also reminded that little is known about the specific effects of the two media, nor do teachers ask about them. In practice, teachers in the FRG do not choose one particular medium but select specific programmes. They use those programmes whose content and mode of presentation seem to be suitable for their lessons; the medium itself is of secondary consideration. The receptiveness of the pupil is difficult to assess, but attractively made school radio programmes have a good chance of being received, especially in primary school.

School radio broadcasts for primary school are considered to have good prospects in Britain, too. The music programmes, we were told, are being used every week by three-quarters of all primary schools – an interesting albeit vage statement. Teachers and pupils accept school radio in principle, but teachers (like scientists) prefer television as an evening occupation and are therefore not familiar enough with the more "highbrow" radio programmes.

Denmark's representative said that there was a general demand for school radio to concentrate more fully on those fields of knowledge and on those tasks for which it is specially qualified, but that this demand was not taken into consideration in practice. In this connection, he turned directly to his fellow panel member from Britain: the BBC offers school radio and television programmes in every subject taught, the only exception being mathematics and religion. He evidently understood the demand for concentration of the medium as a concentration on specific subjects, not on specific themes, contents or functions. But his argument was not taken up.

Teachers in France were said to have a positive attitude to school radio because they had recognized that radio programmes promote imagination and mental concentration. Radio is used only as part of a multi-media system, generally as a complement to school television. One of its functions ist to also supply a feedback, which is made possible by the cooperation of regional educational centres with regional broadcasting stations.

3. How has school radio reacted to the trend in schools towards small group work and open learning systems, to more child-centred and less teacher-dominated learning, in this way establishing the basis for subsequent further education?

The members of the panel emphasized that these and other developments in the school system (e. g. the introduction of the all-day school in Yugoslavia) would naturally have consequences for the conception of school radio, that they would make necessary a differentiation in the programmes broadcast, particularly as "old-fashioned" instruction still exists. Programmes conceived for individual or group study are generally unsuitable for use in traditional teaching. On the other hand, there are particularly good chances of these difficulties being overcome in radio. School radio has an easier task differentiating its programmes than does television; the range of programmes is quantitatively and thematically much wider, and it is technically easier to use: the programme needed is there and ready, children can fix up the tapes themselves and work independently with them.

The panel members were, however, content to give general explanations: school radio must adjust itself to what its listeners expect; the purpose of using this medium is to ensure that the pupils are not wholly dependent on the teacher; new methods are not better just because they are new; the task of school radio is to supply instructional raw material, its actual strong point being to motivate rather than to impart knowledge. Very little concrete information was supplied. For instance, we did not learn very much about how school radio services in different countries have reacted to recent changes in teaching methods as far as their concrete conception of programmes is concerned.

Nor were any further related aspects discussed. Attention concentrated on the alternative of teacher-dominated or child-centred instruction and school radio, but the question was not analysed and expanded to embrace the alternative of school radio being focussed on, or overlapping instruction. This problem was finally approached on the last day of the conference by *Dr. Tamás Szecskö*, who reported in his paper on a survey of Hungarian schoolchildren. It established that 40 per cent of all schoolchildren listen to school radio at home, and that they do not regard this activity as being "home work" but as "listening to the radio" – an attitude which has not been recorded in the customary teacher surveys, but one which is probably important when considering the question of future prospects of school radio, for it demonstrates that a school radio service centred on children does not necessarily have to be centred on school instruction.

4. What significance has the development of new distribution possibilities, e. g. the cassette and its marketing by independent educational publishers, for school broadcasting services?

The general tenor of the answers was that school radio definitely has its own specific function which cannot be contested by the cassette and to that extent it need not fear competition from that quarter. Two main independent tasks were referred to: Firstly, only school radio can make the school public, only via school radio can parents learn about the actual teaching of their children today; secondly, it is the task of school radio to educate the young in how to use radio productively. Neither of these two functions can be taken away from radio by the cassette.

Several of the panel members came forward with more basic arguments in answering a supplementary question posed by the chairman: namely that private enterprises might well take their chance, because school radio has relatively little broadcasting time at its disposal, and because its target audience is relatively small for a mass medium. In the opinion of the Cypriot delegate, school radio should be regarded as a bridge linking school and society. In view of the rapid development of society it is the task of radio to ensure that the development of social awareness does not lag behind, according to the delegate from Yugoslavia, who did not assign this function only to school radio but quite explicitly also to adult education programmes.

A number of pragmatic approaches to the question were also taken. Attempts were reported as having been made by publishers in the Netherlands, with

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government support, to disseminate school radio programmes on cassettes – but with no success. It was still cheaper and less trouble for the schools to record the programmes on tape. The question of cost/benefit was raised at this point but not discussed. Nor, in this context, was there any discussion of recording rights, which vary from country to country; the conference organizers did, however, provide an extensive documentation on the organization, programme contents and programme capacities of school radio in the European countries, which also contained information on the various national regulations on recording rights.

5. Is there any future in school broadcasting?

Very little time remained for this question, which evidently was formulated in an ad hoc manner by the chairman. While the general response was affirmative, it seemed to be largely an expression of the hope and engagement of the panel members. The question was probably put rhetorically because the main object of the conference was to dispel doubts and bolster the self-confidence of school radio. Another aim was to enable the participants to consider the specific possibilities of their own medium, and to this purpose discussions were also scheduled to take place between those responsible for the radio programmes and academic experts. This was also done with the object of freeing school radio from the overshadowing presence of television, and of enhancing its international reputation in both the broadcasting organizations and the schools.

II

The subsequent plenum discussion proved to be little more than a string of statements: on taking his turn, each speaker generally touched on what were frequently quite different aspects of school radio. Accordingly, the impression was gained that the majority of the speakers simply had an urge to air their views: more standpoints and opinions were put forward than facts and information gained from experience. What is more, the speakers' contributions were frequently based on different planes of argumentation. In short, things began as they frequently do at international conferences. But the plenum discussion was probably also handicapped by the fact that this was the first international conference on school radio; for that reason, the delegates – in contrast to the representatives of school television or the experts of the multi-media courses – had no common basis for discussion, nor any jointly drafted information on which discussion could be built up.

Nevertheless, several further aspects were dealt with, points already mentioned were brought up again and partly substantiated, partly modified. It was again repeated several times that school radio and school television should not be viewed as competing with each other, and that nothing was to be gained by constantly comparing the two media. Instead, consideration should be given to the specific tasks and possibilities of radio: It can be more topical than school television; it can offer authentic material which is not available to television; it can be used in a specific way to motivate, to give impulses, to raise controversial topics; it can provide an intensive form of audio-lingual education; and last but not least, it offers special possibilities to musical education. It was emphasized that these claims were not mere assertions or a product of wishful thinking; a comparison of the school radio programmes with educational television series in the FRG, for instance, shows that radio is more successful.

There are, it was said, no absolutely valid theoretical criteria for the specific efficiency and therefore the most effective use of the various media. Nor are such criteria as important as theoreticians think, because in concrete cases selection of media is based on practical considerations. More important than theoretical didactical considerations are material factors such as broadcasting time, financing, questions of copyright, as well as the inclinations of the editorial staff, etc. Moreover, what school radio can actually achieve is not a theoretical question but a practical one: It was thought for a long time, for instance, that mathematics programmes were not really suited to radio, but convincing models have also been produced for this subject in the meantime. Occasionally, a certain aversion even made itself felt in the course of the discussion against the theoreticians and their "didactic regulations", and there was some apprehension that fantasy and dramatic elements might be neglected.

It is quite obvious that the theoretical knowledge of the didacticians and the communication researchers does not guarantee a good programme. It cannot simply be transcribed into programmes, it must be transformed and converted. Decisive for the concrete work of the practitioner are productive ideas, which have, of course, to be based on relevant information, i. e. on information from didactics and communication research. Behind this sort of controversy, however, lies the fundamental question of whether school radio is primarily school or primarily radio, i. e. whether it is mainly or exclusively conceived as an aid for systematic school learning processes, and accordingly as being dependent on prior decisions taken on curriculum, method, theory of learning and instructional technology, or whether it is more definitely orientated to subjects and contents of general interest, while also attempting to meet the demands of adult education and function as a bridge linking school and society.

At all events, the answer to this fundamental question is crucial for the role and importance we assign to accompanying material and how it is to be differentiated. The question put by one participant as to whether accompanying material is always helpful or whether it can possibly be a hindrance also gains significance when considered in this context. Attention was then drawn to a distinction between accompanying material for pupils and for teachers, and printed material, slides, and daylight projection foils. Another participant emphasized that the design and use of accompanying material depends on whether the orientation of a programme is more didactic or more pedagogic, whether the aims of a programme are more cognitive or more emotional. The chairman's question as to the experience with "pure" radio unfortunately drew no response.

An Austrian participant voiced something which had often made itself felt implicitly during the conference: namely, that radio was afraid of television. There was, he said, no justification for such a lack of self-confidence; in fact,

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there was good reason to believe that school radio is the medium of the future, not only due to its specific didactic qualities but also due to the volume of programmes broadcast. He pointed out that in Austria only about 30 school television programmes are broadcast each year compared with no less than 800 school radio programmes. Moreover, after being broadcast, the latter are made available on cassette at the price of an empty cassette through the financial support of the Ministry of Education. On the other hand, little use is made of this service, presumably because not many teachers know of its existence. It was interesting to observe at the conference just how often discussion centred on school television and how very often it was referred to as a standard, whereas very little mention was made, for example, of educational films.

The chairman also put the same question to the plenum which he had previously asked the panel: How has school radio reacted to changes in the school system and to the trend towards working in small groups and diminishing the dominant role of the teacher? Are there any cases where the pupils decide on the use of the media? How is school radio reacting to the rapid changes in the radio broadcasting system as a whole; is it participating, is it playing a stabilizing or an innovating role, or are these changes passing unnoticed with the result that school radio is lagging behind in its own work and programme policy? A Belgian participant pointed out that ten years ago school radio had a pronounced curricular orientation, whereas today there are new programmes more closely linked with reality, new topics are being offered and new methods tried out; above all, attempts are being made to integrate the pupil. A similar report was given by a GDR participant, who said that the pupil is no longer considered as a mere object of persuasion, efforts are being made to work together with the children by integrating them in the discussions. In this context, he described the cultivation of "personal discussion" as a special task of school radio, as a sort of counterbalance to hectic everyday life; and by furnishing models in this connection, school radio also performs a pedagogic function.

Michael Buß

The situation of school radio: School radio studies in the Federal Republic of Germany since 1973

In the last few years several studies have been made of school radio in the Federal Republic of Germany. The most important of them are to be briefly presented here and compared with one another. There are essentially three basic approaches:

1. Evaluating general audience surveys, relating to the use made of school radio;
2. Specialized surveys for school radio departments;
3. Educational school radio studies (function tests).

1. *Evaluating general audience surveys relating to the use made of school radio*

The most important and comprehensive audience survey made by the broadcasting stations in recent years was the "Funkmedienanalyse 1976" – FMA '76 (Radio Media Analysis). Using, among other things, the average daily schedule, this radio media analysis recorded the activities and the radio use of all programmes (at 15-minute intervals) which are transmitted in the Federal Republic by the stations combined in the ARD. Thus it was also possible to ascertain the use made of all the school broadcasts. The findings showed that school radio tends to be a minority programme, which is listened to by the "adult" (14 years of age and above) respondents with varying frequency. An essential factor for the use of school radio is the way it is incorporated into the different programmes and the time of the broadcasts.

In the planning of the broadcasting stations the way school radio is fitted into the general radio programme, both with regard to time and content, is determined not only by the use made of it in the lessons but also by programme policy considerations. This planning is based on experience and analyses of the listener flow, i. e. how many listeners can be carried over from one broadcast into the next, how many new ones join the programme and how many switch off. This "carry-over data" provides pointers for the behaviour of the average listener and of certain groups. The different audience rating findings for school radio broadcasts result, on the one hand, from the attractiveness of the overall programme: the more popular the programme is throughout the day, the greater the use made of school radio. On the other hand, the placing at times when there is a large or smaller audience and the programmes directly before and after are also significant for the use of school radio. The audience ratings from the surveys relate to all listeners over 14 years of age, including therefore "lookers-on" or fringe listeners. They say nothing about the effectiveness of school radio in the lessons.

Below the audience ratings of school radio broadcasts from the FMA '76 (for people over 14) are given in percentages and extrapolated in absolute figures (Table 1). The extrapolation figures presented refer to the areas of transmission or evaluation, which are of varying sizes. All figures given are audience ratings in the average quarter of an hour of school broadcasting on the weekdays Monday to Friday. The audience ratings fluctuate between 0.1% and 9.9% in the different regions and in absolute figures between 8,000 and 273,000 listeners (from age 14). These average values can only be regarded as guidance data, especially in the smaller transmission areas, because the range of fluctuation in the results is considerable, depending on the number of respondents and the coverage.

Table 1: School radio audience ratings according to FMA 1976

Programme	Time of day	Percentage	Transmission area	Absolute number of listeners
WDR I/NDR I	9.05–10.30, or 10.40, or 11.00	2.2 %	NRW*	= 273,000
		2.6 %	SH*, HB*, HH*, N*	= 234,000
NDR III	10.30–11.50	0.4 %	SH, HB, HH, N	= 36,000
	15.00–16.20	0.6 %		= 50,000
WDR III	11.05–12.00	0.2 %	NRW	= 25,000
	15.05–16.00	0.1 %		= 12,000
SFB I	9.05– 9.50	9.9 %	B*	= 168,000
SFB II	15.15–16.00	1.7 %		= 29,000
RB II	8.00– 8.40	0.3 %	SH, HB, HH, N	= 27,000
	16.03–16.45	0.1 %		= 9,000
HR II	9.00– 9.30	0.5 %	Hess*	= 20,000
	15.00–15.30	0.2 %		= 8,000
SDR II/III/SWF II/SR II	9.00– 9.30	1.1 %	BW* and RP*	= 97,000
SDR III/SWF II/SR II	17.00–17.30	0.6 %		= 53,000
BR II	9.00–10.00	0.3 %	Bay*	= 23,000
	15.00–16.00	0.5 %		= 38,000

* NRW = North-Rhine Westphalia
SH = Schleswig-Holstein
HB = Bremen
HH = Hamburg
N = Lower Saxony
B = Berlin
Hess = Hesse
BW = Baden-Württemberg
RP = Rhineland-Palatinate
Bay = Bavaria

As of period of study FMA 1976 (November 1975/March 1976)

2. *Specialized surveys for school radio departments*

In the last few years departmental surveys on school radio have been carried out by the broadcasting stations, by the ministries of education, by both together or have been commissioned by them. In most cases they were complete surveys of schools, the method generally used being that of written answers. The quality of the questionnaires varied, however, considerably, and the evaluations and published findings were mainly concerned to show absolute frequencies or percentages and dispensed with complicated statistical evaluation procedures or with the indication of significance figures. For this reason, as far as the methodology is concerned, much individual criticism can be levelled at the studies. It can be generally said that whoever commissioned the study was able to control the results by, for example, formulating the questions and using reference respondents (especially in the schools). The most useful pointers from the studies, dealt with below in chronological order, refer not so much to the audience ratings that were measured as to questions relating to the conditions under which school radio is used in schools.

a) At the beginning of 1973 a complete survey on the use of school radio in the schools providing general education in the State of *Bremen* was carried out by the Senator for Education, Science and Culture of the Hanseatic City of Bremen and by the Lord Mayor of Bremerhaven at the suggestion of the Broadcasting Council of Radio Bremen. Altogether 78% of the schools written to answered the questionnaire. Of these 78% of all the schools concerned 70% said that school radio was used in the lessons. However, this use of 70% applied to only 14% of the school classes taught. The other questions on individual school radio problems produced in addition very satisfactory information for the department concerned.

b) At the end of 1973 the Media Department of the Süddeutscher Rundfunk carried out a school radio study in *Baden-Württemberg* in which a quota sample of teachers was asked direct questions. It must be noted here that the Süddeutscher Rundfunk, the Saarländischer Rundfunk, and the Südwestfunk cooperate in the production of school radio programmes: Baden-Württemberg represents the major part of the transmission area and was chosen as the basis for the sampling, because there were not corresponding samples available from the other parts of the transmission area. 31% of the written questionnaires were returned, 12 to 18% of the teachers using individual broadcasts or series in the different subjects. Only 18% of those using school radio availed themselves of the original broadcasts, the rest using tape recordings, most of the recordings being made by the teachers themselves privately or at school and few being borrowed or bought from the State-run Audiovisual Centres. School radio broadcasts in the afternoons proved to be particularly popular with the teachers. It could also be seen that the broadcasts were frequently listened to only by the teachers. Although the latter did not employ school radio directly for their lessons, they used the programme in many indirect ways in planning their instruction. The image of school radio, shown on a scale, turned out, it is true, very positively, but it could be noticed that the teachers had a wide variety of requests and suggestions.

c) In May 1975 the Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen made a complete survey of primary schools and secondary modern schools (Hauptschulen) in *Bavaria* for the Bayerischer Rundfunk. The Institute sent out a written questionnaire for the 2nd 1974/75 trimester, and they were returned by three in four schools. Once again, 75% of the schools replying said that they gave school radio lessons. This related to one-third of all teachers at these schools. In fifty per cent of the cases school radio programmes were heard directly on radio and fifty per cent were recorded on tape. But series and courses were recorded more frequently. Those who make tape recordings of school radio broadcasts tend to use them more frequently in the lessons. A length of 20 minutes per broadcast and five to ten minutes broadcasting time for additional working material, were described as optimum for the lessons. Another important finding was that at one-third of the schools the "normal" radio programme was listened to in the lessons on average for a quarter of an hour at least, especially in the subjects German, music, geography, general knowledge and social and vocational studies.

d) At the end of 1975 the Norddeutscher Rundfunk commissioned a complete survey of the schools providing general education in its transmission area – the States of *Schleswig-Holstein, Hamburg* and *Lower Saxony*. 82% of the schools sent back replies. The use quota for school radio in these schools was given as 93%. 39% of the teachers at these schools used school radio, 28% in the lessons and 11% at home. The school radio broadcasts on traffic instruction turned out to be the most popular. Altogether 60% of the teachers avail themselves of school radio in the NDR area by means of tape only, 16% by means of radio only and 24% use both radio and tape. The relatively frequent repeats of school radio broadcasts in the NDR programme, namely in the afternoons and the next week, is regarded as necessary by 34% of the teachers.

e) The Saarland Ministry of Education, in cooperation with the school broadcasting department of the Saarländischer Rundfunk also made a complete survey at the end of 1975 covering schools providing a general education in the *Saarland*. 70% of the schools, employing 90% of the teachers in the Saarland, replied. The user quota was given as 36% for schools and teachers. 42% of the teachers use tape recorders when they present school radio broadcasts in their lessons, 32% listen to the school broadcasts at home in the afternoon and 28% hear the original broadcasts at 9 a. m.

An altogether unsatisfactory result was produced by the question as to the language complexity of school broadcasts, which 12% of the teachers regarded as too difficult for the class level they were intended for.

f) In 1976 the Infratest Institute made a special survey for the school broadcasts of the Hessischer Rundfunk at all the schools in *Hesse*. The questionnaire survey dealt only with the books for use in conjunction with the school broadcasts. It was possible to receive replies from 80% of the schools. At altogether 60% of the schools to which these books are sent regularly the teachers also use them (in 17% of the schools that applies to almost all the teachers, and in 42% at least some). On average there are about three users of the books for each school radio subject. More than two-thirds of these books are kept in the staff rooms, and only specialized teachers at larger schools purchase them directly. The importance of these books for the teachers is undisputed. Two-thirds of the teachers describe them as good or even excellent. Only very few were dissatisfied with them. However, this survey showed that in the majority of cases the school radio books were not used to prepare a school radio lesson but to provide the teachers with background information and for the preparation of lessons generally.

g) The Ministry of Education in North Rhine-Westphalia commissioned the Institut für Medienverbund und Mediendidaktik at the Forschungs- und Entwicklungszentrum für objektivierte Lehr- und Lernverfahren (FEoLL) to take a sample of the schools providing general education in *North Rhine-Westphalia* for the school year 1975/76 and to make a survey of these schools and the teachers. 47% to 59% of the schools and 36% of the teachers replied. It was shown that 86% of the schools use school radio, and 81% of the teachers – only those were considered, however, who regularly purchase material published for school radio – said they had used school radio broadcasts in their lessons in that school year. Those purchasing school radio books are of the opinion that using school radio in the lessons does not as a rule involve more work and think that the best length for a broadcast is, on average, 15 minutes. A comparison with school television in this survey showed that almost the same power to motivate pupils is attributed to school radio as to school television though radio has, of course, only restricted possibilities of presentation compared with the audiovisual medium. At primary schools, school radio programmes are thought to be even "better". The material in school radio is given a more positive evaluation than in school television; nevertheless, school television is usually given preference when the programmes coincide.

Summing up, the above-mentioned studies show the following trends and viewpoints:

- The school radio programmes do not cover all *subjects* equally. The particular points of emphasis partly determine the frequency of use. Irrespective of this, German, civics, history and geography tend to be the school radio subjects listened to most. Other subjects which are regarded as important or desirable are those which are relatively new and not yet adequately covered by the curricula. The teachers are especially grateful for advice on methods and didactics.
- The school classes which make the most *use of school radio* vary considerably according to transmission area and subject. Apparently there is a different degree of congruence between the curriculum and the school radio programmes in each case. The tendency is for school radio to be used more frequently in the first half of the year or at least before the last of the three terms than towards the end of the school year. In the different types of schools it is natural that interests in subjects in school radio broadcasts diverge considerably, and this applies in particular to the wishes expressed with regard to the *accompanying material*. In primary schools there seems to be a greater interest in pupils' work sheets, while in the higher classes a variety of supplementary aids are expected, such as graphs, photos or other forms of visualization. The annual programmes or programme booklets put out by the broadcasting stations a very important

for providing preliminary information on school radio at the schools and determine the use to some extent. In almost all of the surveys, however, it can be seen that these programme previews could be improved. This also applies not least to the ways they are distributed. The problem of distributing the accompanying material has not been satisfactorily solved in most cases; thus many teachers said that this supplementary material was difficult to obtain or even unobtainable and that the school broadcasts were not used because of the lack of additional stimulating material. Seen from this point of view, the best solution would seem to be to distribute subject sheets to the subject teachers concerned. However, the effect of distributing the material in this way is reduced by the fact that – at least in the primary and secondary modern schools – many of the teachers give lessons in subjects for which they are not qualified. In Baden-Württemberg, for example, 25 to 50% of the teachers were seen to be teaching subjects which they had not studied.

- As far as the *modalities of using school radio* are concerned, it is quite remarkable that many teachers listen to school radio broadcasts privately without using them directly in the lessons. The school broadcasts are apparently frequently required for guidance and preparing instruction, but not for the actual lesson itself. It is in this connection that the trend for greater use by the teachers of the afternoon rather than of the morning broadcasts should be seen. The fact that the programmes either do not fit in with the timetable or cannot be used in the lessons for organizational and technical reasons frequently stands in the way of the demand for morning broadcasts. One of the chief reasons why tape recordings of school broadcasts prove to be advantageous is that they allow the quantity of material to be restricted, breaks to be made as required by the lesson, and the pupils to be activated. More frequent repeats than usual or maintaining the practice of making several repeats as in some of the transmission areas increase the use made of school broadcasts, and only in exceptional cases are they negatively assessed.
- The extent to which the *schools are equiped with radios and recording devices* and their availability for the teachers varies. On average, they seem to be better equipped with tape recorders and cassette recorders than with radios. But everywhere there are appreciable percentages of teachers who have no direct access to school equipment; for this reason apparently private (especially tape) recorders are frequently used. The system by which the *Audiovisual Centres* of the Länder and of the local authorities distribute recordings of broadcasts could probably be improved, since they play a secondary role in most of the transmission areas. It is apparently less trouble for teachers who have their own recording devices to use them rather than to order the tapes from the distribution agencies. An exception seems to be the Audiovisual Centre in Berlin, which, it claims, receives over 50 orders for school broadcasts a day. This high figure might be due to the fact that the broadcasts are well known – according to FMA '76 9.9% adult listeners for each quarter of an hour of school radio in the mornings.
- In addition to the lack of radio and recording equipment here and there, the

teachers' *inexperience in handling it* is, however, still a hindrance for using school radio; modern, handy cassette recorders facilitate the handling of technical equipment, and are, moreover, cheaper than the "old" tape recorders. Teachers who consider the work involved for the lessons to be only slight, and also say that they regard preparing the class for school broadcasts as no great problem, reject, more frequently than others, the "trouble" in using technical media in lessons as a pretext. Appropriate steps in teacher training would, no doubt, result in further dispelling prejudices towards school radio.

- It is acknowledged that school radio is very good for *motivating the children* and thus produces a degree of interest in the lessons which apparently also contributes to the school broadcasts being in the main positively assessed. The period of time the pupils can be expected to concentrate when listening to broadcasts is, however, generally thought to be shorter than the usual length of the broadcasts assumes. The teachers are in favour of shorter broadcasts, for example, lasting 10 to 20 minutes and/or they plead for more or longer gaps when the programme is worked out.
- One of the topics dealt with in the surveys in the Saarland and in North Rhine-Westphalia was the *language level of school broadcasts.* For example, in the Saarland 12% of the teachers thought the broadcasts were too difficult. In North Rhine-Westphalia 9% considered the vocabulary to be too demanding – 6% the sentence construction and 15% the speed of speaking too fast. Also the *quantity of material* was felt to be too great for one lesson. Such assessments worsen the attitudes to school radio in general, they reduce the willingness of the teachers to employ school radio and impair the effectiveness and usefulness of the programme in class lessons.

3. *Educational school radio studies (function tests)*

Up to now empirical school radio studies which directly constitute function tests of school broadcasts have been relatively rare. *H. Steinforth* of Bremen University, with his empirical work on lessons supported by school radio, has taken a new path in school radio research which is of fundamental importance. Steinforth's studies represent in a certain way an antipole to questioning listeners on their use of school radio, because they deal directly with the employment of school radio in the lessons. Steinforth points out that there is no adequate empirical research into the didactics and methodology of the employment of school radio in the lessons. Moreover, he does not restrict himself to investigating the learning successes achieved with school broadcasts. He is, rather, of the opinion that the learning success alone – normally recorded a short time after presentation – provides no information on the usefulness of school radio as an alternative form of lesson. For this reason he recommends that, in *function tests,* school radio should be compared with other forms of presentation with regard to the learning effectiveness, for example with written or audiovisual instructional aids or with the "normal lesson". Here he has the function of school radio for the lessons in mind: the teaching processes, the structure of the lessons and in particular the teacher-pupil interactions. What part does school radio play in disclosing certain contents of the lesson, and what effects does it have on the didactically prescribed teacher and pupil roles contrasted with lessons without school radio?

The design of Steinforth's study provides for a two-stage questioning of teachers, all teachers at schools of general education in the City of Bremen being used in the first stage and in the second stage only those who use school radio. Of the teachers who employ school radio some are selected in the next part of the study who consent to a recording being made of the lessons with and without school radio. Word records are compiled from the tape recordings of the alternative forms of lessons and the success or failure of the school radio lessons is determined by means of a statistically based process analysis.

The empirical work of the study is, according to Steinforth's information, completed, the lessons have been recorded and analysed, but the statistical evaluation of the process analysis has only just begun. The following data is available from the first stage of the survey and it agrees more or less with the findings of other surveys: In the first half of the 1975/76 school year between 10 and 20% of the teachers used school radio in the lessons. The number of lessons with school radio in these first six months amounted to 4 (median), and for the individual teachers limits between 1 and 31 of such lessons are given. The most use was made of school radio in the subject civics/social studies.

4. *Concluding remarks*

Since most of the studies mentioned here are of a descriptive nature and are based on conventional survey methods, the results are generally only of importance as suggestions for formal changes in the school radio programmes. These formal aspects relate, for example, to the times of the broadcasts and their length, repeats, the design of books for use with school radio and of posters, the standards of the lessons etc. Not until empirical studies based on theory have been made with complexes of questions which examine the structure and function of the school lessons, subject didactics and (media) methodology can we hold out any prospects of obtaining fundamentally new knowledge for treating the content of school radio series and individual broadcasts.

The fact that school radio also has its effects outside the school, namely considerable groups of (adult) "lookers-on", for whom these programmes may have the important character of providing information, advice and a service, is shown by the FMA findings mentioned at the beginning. Radio's educational duty involves the consideration of these groups of listeners. To what extent this need can be met by school radio broadcasts or by other educational programmes depends on decisions resulting from broadcasting policies and programme planning, which were not subjects to be discussed here. In the Federal Republic of Germany it is quite typical for different groups of listeners to make use of school radio broadcasting. From this we can conclude that separate programmes should be drawn up "for the school" and "for home use", or an attempt can be made to base the programmes on the "common interests" of the different groups of users. Finally, modular forms of programmes can be imagined, for example with educational broadcasts "for the general public" (including use in schools), special educational broadcasts "for lessons" and broadcasts which are intended solely "for home use". Research into the subject, however, does not have any simple recipes for these decisions.

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Jan Peter Boorsma

The situation of school radio: Aspects of qualitative school radio research[1]

School radio began in the 1920's. Research on this medium began shortly after[2]. Why then should it be necessary in 1977 to make a plea for conducting research on the qualitative aspects of school radio research? I believe that there are basically three reasons which necessitate the conducting of qualitative school radio research.

The first reason concerns the development of a more differentiated didactic vision of the role of school radio. In the 1950's and 1960's school radio was seen primarily as a teaching aid, as a medium for the enrichment of the subject matter being taught. When school radio is used in this way, it can be said to play a supplementary role.

Around the year 1970 there was an increasing amount of interest in research on this medium. The explanation for this lies, in my opinion, in the role of radio in multi-media open-learning systems for adults, on the one hand, and in the great importance of educational radio in and for the third and fourth world, on the other. In these countries the medium is used for the dissemination of "prepacked" courses, and in this way it takes over most of the educational and instructional functions of the teacher. The role of the medium can be seen here on the level of curriculum development. If school radio takes over many of the essential components of a curriculum, then we speak of the complementary role of school radio.

Curricula usually function to support the already institutionalized educational system. If it is the case that certain levels or categories of the educational system are lacking and a curriculum must be developed to fill this void, then school radio is often used. This occurs primarily in the developing countries of the world. When school radio is used in this way, we speak of its partial system-substitution role.

The second reason deals with the question of who makes the decision about the role that school radio will play. If school radio plays a supplementary role, then the answer to this question is clear. The teacher corps makes the decision. What occurs then, if guidelines are set, e. g. by a department of education, for the use of school radio? In this case we not only deal with the teacher/learner situation (the micro level of the educational system), but also with the whole curriculum (the meso level of the educational system), and, as a consequence of this, with a governmental educational policy for school radio (the macro level of the educational system). It is, therefore, necessary to look at the phenomenon of school radio not solely at the micro level, but also at the meso and macro levels of the educational system.

The third reason deals with the research methodology which has been used to date. For a long time, and certainly up to the beginning of the seventies, school radio research had fallen under the research methodology of mass communications research. This implies that school radio research, if the tradition to conduct empirical research existed at all, strived to ascertain the effectiveness of the mass medium school radio. Through random sampling and the use of descriptive data-gathering instruments (i. e. surveys, questionnaires and checklists), the researchers tried to make generalizations about the effect and the effectiveness of school radio. Little by little it becomes clear that the medium not only has an effect, but that it also exerts an influence. The question which arises here is whether or not it makes sense to continue using the research methods borrowed from mass communications research, methods which are used primarily for quantification and aimed at the production of generalized statements about the effects of school radio.

This type of school radio research has restricted itself to the role school radio plays in the teaching/learning situation, which is a supplementary one, as we stated earlier. This type of research investigates the amount of time spent on the preparation and follow-up of the school radio lesson, the rating of the didactic value of the programme by the teacher, whether the broadcast times were suitable for a specific target group, whether or not the radio "motivated" the students, whether the subject matter was relevant, etc.

This type of research is not in itself bad, if one's aim is to answer these very narrow questions. If one's aim, however, is to delve deeper in the realm of the influence which school radio may exert upon the educational system as a whole, then some other type of research is needed. Perhaps it would make more sense to study the influence that school radio has on the classroom learning situation, on the aims and objectives of the curriculum, and on the educational system itself.

Needless to say, I am making a plea here for a research policy which deals not only with the supplementary role of school radio, but also with its complementary role. That is to say, we must not only study the effects of school radio in the narrow sense of the teaching/learning situation, but also in the broader sense of the influence which school radio exerts on all three of the aforementioned educational levels. This implies, however, that we must search for an educational theory which acts as a foundation for the conducting of qualitative school radio research.

What exactly is meant by the term qualitative school radio research? Qualitative school radio research is the description and elucidation of the role which school radio plays within the educational system, based upon certain educational theories or principles.

Glaser and *Strauss* speak here of a "grounded theory"[3]. In other words, the research is not intended to achieve generalized statements about the effectiveness of, in this case, school radio, but rather to determine and to analyse its influence.

It is very appealing to make a plea for a grounded theory approach, but such a theoretical starting point for school radio research hardly exists. Furthermore, the problem of forming a theory relating to the medium school radio is not unique to school radio. *Heidt* has made clear in various publications over the last few years that theory forming relating to media is, in general, urgently needed[4]. If the theoretical basis for school radio research is so minimal, then one runs the risk of ending up with one's research forming a vicious circle. If this is the case, we then tend to choose the most obvious data-gathering instruments and become therefore primarily quantitatively involved. Through realizing the direction in which qualitative research must proceed one increases the chance of breaking this vicious circle.

From now on, I will try to be more concrete about the so-called theoretical principles in relation to qualitative research.

Fig. 1

Role Level	Partial system substitution	Complementary	Supplementary
macro	1	2	3
meso	4	5	6
micro	7	8	9

In figure 1 the three levels at which school radio may be analysed, i. e. the macro, meso and micro levels, are brought into a relationship with the three roles which school radio can fulfil, those being partial system substitution, complementary and supplementary. This matrix functions to combine two theoretical principles of education, these being:

a) we are speaking of a theoretical idea pertaining to the way in which roles are related to the levels of the educational system,

b) with this theoretical idea, a research matrix can be formed which determines and accounts for the choice of research variables, and

c) it becomes clear that qualitative research deals with description and analysis of the influence of school radio as well as the evaluation of results.

Via this matrix we are able to carry the research on school radio beyond the dead-end of effectivity research on the micro level alone, which usually only involves cell 9, and begin to deal with this phenomenon on all three levels.

This, however, is not enough. This matrix which we have been working with is still too formal. It allows for the possibility of generating a large number of research questions concerning the phenomenon school radio in its relationship to an educational system. Qualitative research, however, not only requires the development of formal research paradigms, but also requires a research paradigm that allows for a more substantive research approach. I have been involved in the development of just such a research paradigm for the past two years. I would now like to present some viewpoints and possibilities inherent in this paradigm.

The central question for me was: How does one relate types of research with substantive aspects of school radio? This may also be posed as: How does one design research projects wherein the school, the medium "radio", and school radio as a phenomenon in itself are subjects of this research. I have deliberately placed the school, the radio and the school radio alongside each other, because the school radio organization and the school radio producer develop a school radio product wherein one considers the possibilities of radio as a medium as well as the possibilities of school.

What happens, however, in reality? The producer (sometimes a team, but for the sake of simplicity I will speak of a single producer) makes the decisions pertaining to objectives, content, and design. These decisions are often of both an organizational as well as an educational nature. The outcome of all these decisions is a school radio programme which ranges from the school radio organization to the educational system.

The producer does not work autonomously. Through consultations between school radio organizations and representatives of the educational system, guidelines are developed which determine what is to be offered, these guidelines differing from country to country. In Bavaria, for example, these guidelines are more stringent than those in the United Kingdom, which in turn are more stringent than those in Holland[5]. What these guidelines have to do with qualitative research will hopefully be elucidated in the following example. In Bavaria, the Bavarian school radio must conform its offerings to curricular needs and developments[6]. Let us assume that the Bavarian educational authorities determine that a gap exists in the biology curriculum. What then will the Bavarian school radio offer in this situation? Would they offer a biology series with learning materials intended for student use, or a series with which the teacher must

a) the levels at which the process of educating may be analysed; and

b) the roles school radio may fulfil.

In this matrix, each cell forms a theoretical beginning for the development of questions in a qualitative research framework. Thus, cell 2 would yield the following type of question: In what way and to what extent does educational policy and administration determine the extent to which school radio will fulfil a complementary role? The question, however, could also be precisely the opposite, i. e.: To what extent has research on the complementary role of school radio the consequence that educational policy pertaining to school radio must be altered?

In the same way cell 3 might yield the question: To what extent have governmental educational policy-making measures influenced the objectives and contents of school radio programmes which were intended as supplementary material to a certain subject matter?

Cell 6 in our research matrix must be dealt with as well. Thus the influence of cell 3 on cell 6 means that the implementation of supplementary school radio materials recommended by the government influences the internal structure of the curriculum, which generates the following two questions:

a) How does this implementation occur and what is its success?

b) How is the curriculum changed through this implementation?

Finally, from cell 9, one would expect a research question such as: What are the consequences of this supplementary approach for the role which the teacher plays in the teaching/learning situation?

If one assumes that educational policy measures on the macro level originate from an independent broadcasting corporation rather than from a ministry of education, then one must ask oneself, whether the influence and effects of this policy on cells 3, 6 and 9 would be the same.

Let us take another example. Let us suppose that one would like to know how the teacher rates the didactic value of a radio series. From which cell will the research question originate: cell 5, cell 6, cell 8, or cell 9? Let us assume that the teachers are allowed to score their opinions as to the didactic value of a radio series on a scale of 1 to 10. On the basis of this rating system we obtain an average of 7.2. This score, however, may prove difficult to interpret, since the motives of the teachers can be very different. For one teacher the series may have been of didactic value, but seen from the viewpoint that the programme fulfilled a supplementary role; in which case we would be dealing with cell 9. For another teacher the programme successfully filled the gap that existed within the curriculum itself, in which case we would be in cell 5. The consequence of this variation in motives is that the researcher is forced to define more carefully which role aspect and level of the educational system the variable "didactic value" relates to, thus leaving less possibility for diverging interpretations.

These examples may be seen as being illustrative of a qualitative research approach because:

work on his or her own (thus without the aid of professionally developed student learning materials)? This in effect would result in school radio fulfilling a supplementary role. They may, however, offer a multi-media programme series. In this case, radio with accompanying slides and/or other learning materials would be developed in such a way that one speaks of a teacher-independent educational package. School radio fulfils a complementary role here. In both these situations, decisions have been made during the production phase pertaining to the objectives, the content, the structure of the information, and the evaluation possibilities.

The decisions pertaining to a programme fulfilling a complementary role are much more complicated than those pertaining to a programme fulfilling a supplementary role. In the case of a programme fulfilling a complementary role, the educational learning package must be extremely carefully designed so that the student is capable of achieving the educational objectives more or less independently of the teacher. Through evaluative research, both formative and summative, one could hope to answer the question of whether or not those decisions, and the package itself as a whole, worked.

All these decisions may be divided into two categories, namely into management decisions and design decisions. *Stowe* and *Schwen* make clear in their article "Varieties of analysis in instructional development"[7] that every development pertaining to the teaching/learning situation presupposes decision-making in both the management as well as the design sphere.

Let us now analyse this paradigm in detail. Up to now, school radio research could for the most part be considered as research "with the medium" and nothing more. This type of research is characterized by questions such as:

- Was the time of broadcasting suitable?
- Was the number of broadcasts dealing with the subject sufficient?
- Did the class listen to the broadcast as it was being transmitted or did they make a tape-recording of the broadcast for use at their own convenience?
- How long was the follow-up by the teacher?
- How appropriate was the teacher's manual?

The salient points raised here are that:

a) the specific role of school radio is not dealt with,

b) the manner in which the teachers, and not the students, worked with school radio is primarily questioned, and

c) a theoretical educational foundation is lacking in relation to these types of questions.

When we speak of qualitative research, the concepts "management" and "design" allow for the possibility of formulating research questions which are founded on the educational content of these two concepts. *Salomon* offers another pair of concepts[8]. He makes a distinction between research "with the medium"

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and research "on the medium", referring in this way to two different types of research. Salomon defines research "with the medium" as "research in learning which happens to use media as a source of stimuli but does not tell us much about the functions of media". Research "on the medium" deals on the other hand with "the unique cognitive functions that unique modes of presentation can accomplish".

I will now repeat the question that I posed earlier, which is: How does one relate types of research with substantive aspects of school radio? If we relate both these pairs of concepts with each other, we arrive at the following research paradigm[9].

Fig. 2

Research

"with"	2		1
"on"	4		3
	"design"		"management"

Let us now look at cell 1 (see fig. 2). Research "with the medium" is coupled with the concept of "management". In this cell one finds questions dealing with the role of school radio as well as the reaction of those in the educational system to this role, with respect to educational and instructional objectives. With the questions generated from this cell one would attempt to ascertain whether or not the medium school radio offered a programme series which at the time of broadcast made it possible for the students in a specific target group to achieve the educational and instructional objectives aimed for.

If we now look at cell 2 and compare it to cell 1 we may arrive at a clearer picture of what the difference between them is. Cell 2 implies research pertaining to the reaction of teachers and students to the programme offered, to the internal design of student learning materials and to the broadcast itself. In other words, the accent lies on the question of whether the structure of the school radio package and the didactic design applied to it made it possible for the student to achieve the educational and instructional objectives aimed for. This may become clearer with the help of the next example. The school radio organization has decided to broadcast, say, a chess programme. During the development of this course, decisions were made over the form and content of this package. The school radio course on chess consists of 10 broadcasts, slides, written learning material, and a teacher's manual. Through research you wish to have the following questions answered:

- Would 10 broadcasts be enough to achieve the objectives aimed for?
- Did the slides help in achieving these objectives?

- Was the number of exercises in the student learning material sufficient?
- Was there enough time during the broadcast itself to carry out the instructional tasks given during the broadcasts?

In other words, you are not only questioning the role and function of the medium, but also the design aspects of the series. In actuality, what you are doing is verifying whether both the management and design decisions taken during the developmental phase pertaining to the role, function, content and design of the total school radio package actually worked.

Cell 3 implies research which questions the relationship between specific characteristics of the medium "radio" in the school radio package and the manner in which those involved in the educational system react to the achievement of the educational objectives. Given the fact that radio is a suitable medium for the implementation of large-scale innovations in a specific subject matter area, the research questions must be directed toward the relationship between the innovative programmes (e. g. a teacher-independent educational learning package) and the use of these programmes by both the teachers and the students. For example, the Bavarian educational authorities decide to make chess a required subject in the primary school. The task which the Bavarian school radio must then carry out is the development of a complementary learning package which functions independently of the teacher's ability in the given subject. What must then be studied is whether or not this programme was effective for the specific target group for which it was intended. Questions arise such as:

- Did school radio actually fulfil its complementary role?
- Must the contribution made by the medium be changed in any way?
- What is the relationship between the structure of the material designed for student use and the achievement of the objectives by the students?
- Is it necessary for better explanations to be given during the broadcast, specifically in relation to the structure of the material designed for student use?
- How many students achieved all the objectives?

Cell 4 implies research oriented not only towards the specificity of "radio" as a medium, but also towards the didactic design of the broadcast and the learning material. In other words, the interaction of programme design with the characteristics of the medium itself is what is of interest here. In this respect it is interesting to determine whether dramatization is a didactic precondition for the achieving of instructional objectives. For example, is narration as a presentation form more suitable for children in the fifth than in the sixth grade? This type of research is difficult, but one must make allowances for the fact that it is still in its infancy.

If we attempt to summarize the two previously described research paradigms in the light of what qualitative research on school radio means, then we come to the conclusion that the use of educational principles, such as level of analysis, role, management, design, research "with" and "on" the medium, gives direction and form to the foundation upon which such research questions may be grounded. In this way an attempt can be made to describe, elucidate and explain the influence and effect of school radio on the educational system as a whole.

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Sabine Jörg

Issues in perception and attention in relation to the reception of radio broadcasts:

The present status of research

Introduction

If I speak to you of the scientific approach to perception and attention I do so not because I am convinced that scientists have already found the philosopher's stone with respect to questions related to school radio broadcasting. Neither is it my intention to load you down with a myriad of isolated findings from this broad spectrum of research. But I do hope that the theoretical and experimental findings, which I have compiled for you, will suggest to you some new ideas.

I will report to you about the results of studies on auditory perception. Some of these scientific "insights" may appear trivial to you because the scientifically tested relationships have long been accepted as practical reality by you. There may, however, be other findings which could serve as impetus for reevaluating present practices and forms of presentation in school radio broadcasting, and lead us to consider some innovations.

To begin with, let me present a brief overview of the individual topics which I wish to cover. I want to deal generally with theories of perception and attention, then show individual differences in the manner of perceiving, and how we evaluate others, based on auditory perception. Finally we will give some thought to the importance of the human capacity for imagery, i. e. images, and to their meaning for school radio broadcasting. At the end, I shall explore the relationship between auditory verbal messages and pictorial material.

1. *Theories of auditory processing: On the selective function of attention*

Of course, everyone knows what attention is. That is why I hope that you are willing to give me your undivided attention for the next forty-five minutes. But actually what is it I expect you to do? Do I expect you to look at me, to concentrate on what I have to say with your eyes closed, not to fall asleep, or that you remember my presentation?

There is no dearth of definitions of attention. Usually they contain statements like "attention is the tuning of the sense organs to particular things or events". This tells us no more than we knew before.

Here we are not interested in appropriate definitions but rather in the question of how one can recognize attention. Imagine a student sitting in front of a radio

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listening to a geography program. You are interested in determining how attentive he ist. There are many different possibilities for measuring attention. I'll briefly list the four most important of these:

a) The first involves measurements of *psychophysical* variables. Here one registers to what extent the perceptual experience affects the physical condition of the person. For example, a student is listening to music. Suddenly there is a change in the intensity or the rhythm, or there is an unexpected pause. These changes lead to measurable reactions in the electrical conduction of the skin and in the pulse frequency. In the case of physical reactions the meaning which a perceptual event has for the person plays a specific part. An individual who expects some mundane telephone call will react less intensively to the ringing of the phone than one who expects a call from his sweetheart.

b) The second method of attention research is the *observation* of behavior. Here, for example, one would measure how quickly the student reacts to auditory stimuli. The term stimulus is used to define any acoustical signal. It can be a music program, a speech program or simply noise. For example, if one wants to compare the behavior while listening to a history program with that of listening to a detective story, one might observe how often the child speaks during the program, whether he sits quietly and relaxed or is tense, whether he moves around, whether he is distracted. However, such observations alone do not always provide unambiguous evidence about the interest in or the attention paid to a program. For example a child may walk around the room because he can no longer take the tension which has been built up by the program. But he may engage in the same behavior simply because he is bored and is turning to other things.

c) Here *measurement of retention* provides more exact evidence. What one tests in this case is what aspects of the content of a program have been retained or what portion of material has been retained vs. what has been forgotten.

d) Last but not least we turn to the method most frequently employed for the measurement of attention, the *verbal judgment*. The individual is simply and directly asked how he would evaluate his experience of the program.

Keeping these options for measuring attentive behavior in the back of our minds, we can now turn to the theoretically relevant data of the research on attention. We find there are two questions which are of major importance. What does the individual do with the stimuli, and what do the stimuli do to the individual? We are looking here at two perspectives of the same thing. In one case we are asking what the individual does with the auditory presentation, in what manner do his senses perceive the program, how is perceptual content screened. In the other case we are dealing with the qualitative aspects of the stimulus offering. What attributes contribute to making the stimuli attractive, entertaining, curiosity-arousing? The central question here relates to the rules which govern the *selection* of stimuli, i. e. why we "attend" some things and not others.

An individual consciously perceives only a fraction of the sounds and noises in his environment. It has been said that Caesar was capable of doing seven things at the same time. That would be a challenge to all of us, because normally we are unable to attend even two different perceptual events. If that were possible we could broadcast two programs on the same frequency. In fact the *selection* of environment stimuli is one of the most important characteristics of human perception. We are not capable of intelligently responding to two different perceptual events simultaneously. We have, however, learned to respond selectively to perceptual messages offered. When you are talking with a colleague in the lobby, you are able to filter out, so to speak, all conversation which is going on around you. This capacity to filter perceptual stimuli is at the center of *Broadbent's* (1958)[1] well-known theory of attention. Broadbent assumes that all auditory stimuli are sensorially received by the ears, but are immediately subjected to filtering. Only parts of the information are subjected to a detailed analysis.

Adult humans are able to ignore, filter out, even the most intensive perceptual stimuli. But that is not so for children. Imagine for the moment that a child is confronted with two verbal messages at the same time. The child is told to attend to only one of the two. In such situations it has been shown that younger children are affected by the *intensity* of the irrelevant message. In the case of let us say, first graders, the error rate clearly increases as a function of increased intensity of the irrelevant message. The content of the irrelevant message also operates as an interference variable, i. e. the more alike it is to the relevant message the more it inhibits focusing on one of the two sources of information (c. f. *Hedrick* and *Kunze*, 1974)[2]. This shows that the selective filter does not function as well in children as it does in adults. Different perceptual messages are not segregated adequately but interfere with each other. This fact should be taken into consideration when school radio programs are presented in the classroom.

As we mentioned, adults have a high capacity for filtering out irrelevant material. But we have not yet answered the question of how the individual, i. e. his perceptual system, decides what is or is not important. Information which has been filtered out is not totally lost. That is shown by the fact that you prick up your ears when your name is mentioned even if at the time you are engaged in a most absorbing conversation. This phenomenon cannot be explained with a simple filter theory according to which only part of the information is permitted to pass through the filter. Apparently unattended information is permitted to impinge upon our consciousness to a greater degree than we would suspect according to our subjective experience and the older theories. In one way that is a great advantage. If we are in a position to switch, less is lost. But it also means that we have to process more information. That means the perceptual system is subject to interference. Interference means the mutual inhibition of various messages.

While *Broadbent* assumes a relatively simple perceptual filter, *Bruner* (1957)[3] sees perceptual processing within a larger context. According to Bruner the *expectation* one has about an event plays a determining role in the perceptual process. According to this notion, perception is a compromise between expectation and external information. The individual not only analyzes information but also *constructs* meaningful events. This is also emphasized by *Neisser*[4]. According to

Neisser perceptual processing cannot consist solely of various analyses of incoming information, the individual also contributes something. Man is not a *tabula rasa*, rather he fears, wishes or infers that an event will be structured in a particular way. This anticipation is not only a significant component of human adaptability but it also results in an inability to ever perceive events objectively.

If a child expects his friend whistling for him at the school door this whistling will be perceived more rapidly than it would be perceived by another pupil who is not set to hear it. But the child will so-to-speak misperceive perceptual events and alter them according to his expectation. That is true for auditory as well as visual perception.

At this point I wanted to present to you an example of an applied study from the field of auditory perception. That is hardly possible, because visual perception plays the dominant role in the psychological literature in the same way that it does in the discussion of media-didactics. This is true despite the fact that psychologists know that it is the auditory and not the visual modality which plays the determining role in the socialization of man. Deafness restricts an individual's personality development far more than does blindness. It is audition which mediates basic attitudes and values like faith, justice and honor.

Thus I must refer you to a study on expectations which is far removed from everyday life, and let you extrapolate to analog phenomena in your fields.

Bruner[5] repeatedly presented subjects with a light and a tone simultaneously. If, following that, the light alone appeared, the subject insisted on having heard a tone. In a way they hallucinated a tone. They insisted that they heard it because they expected to hear it.

There is a further aspect of perceptual processing which needs to be emphasized, namely the depth of analysis which has received increased attention since the publication of a paper by *Craik* and *Lockhart* (1972)[6].

Traditional models of memory assumed that we have a series of pigeon-holes in our head for processing information, for example a short-term store, a long-term store etc. But how do Craik and Lockhart view it? They postulate that the processing can be explained in terms of a *single* factor. They assert that recall of an event is directly dependent on the *depth* at which this event was analyzed, hence depth of analysis. Some stimuli require only a very elementary analysis, e. g. the honking of a car horn is already easily understood by children. Other perceptual events like the spoken language require more complicated processing. At first, speech is analyzed in terms of its superficial features like pitch and loudness of the voice. Then sound units are formed in order that words and phrases can be articulated. The deepest level of analysis corresponds to the comprehension of meaning.

If a pupil is detracted, fatigued or faced with excessive demands, the analysis remains at a relatively primitive level. The information is not meaningfully processed. Later the child may only be able to indicate whether a woman or a man had spoken. But he cannot reproduce the content of the message. If there was strong interference during the process of analysis he is not even able to say what language was spoken.

One final point, the human capacity for perceptual processing *does not* remain constant. Until recently, and to some extent today, attempts have been made to calculate with clever formulas the amount of information which the human ear could absorb (c. f. *Cheek*, 1977; *Hsia*, 1977)[7]. These were then compared with the processing capacity of the eye, leading to a "validation" in terms of information theory. Recently, studies have increasingly indicated that, in this respect, man is not a computer, rather his processing capacity is a function alertness. The maximal processing capacity varies from time to time. *Berlyne* (1974)[8] extensively investigated the relationship between readiness for learning and stimulus features, e. g. intensity, or complexity. He found that a sudden change in the intensity, or in the speed of presentation, or in the surrounding of the event leads to greater alertness and stimulation. If a perceptual event is new, surprising and complex it induces alertness. We can say that it was contrary to expectation. A familiar and often experienced event can suddenly become relevant and noticeable again. But the change from the familiar and intimate should not be to extensive, otherwise the individual may react with fear. That implies that even the most sensible modification of a program unit or total program will not be perceived positively if the familiar aspects are suddenly replaced with new ones. It is the *successive* substitution of new elements for old ones which elicits attention. This impetus, produced by change, is already employed in radio and television broadcasts. The listener (viewer) is placed in a state of uncertainty und tension and thus observes the events attentively. Another example is the segmentation of a news broadcast into smaller units in order to create the impression of being more newsworthy. By the way, spoken language evokes more excitation than does written text. The spoken word is also more persuasive than printed text (*McGuire* 1969)[9].

We now have an admittedly sketchy outline of the theories of attention. Let us keep in mind the following points:

a) The individual's focused attention on particular stimuli to the neglect of others was explained in terms of a so-called selective filter. In children this selective filter is not adequately operational.

b) Expectation changes the perception of an event. The individual always contributes something to the perceptual events which are present. He interprets the percept.

c) Alternatively one can examine the perceptual process in terms of the level of analysis. Comprehension of meaning occurs only when the deepest level of analysis is reached.

2. *Personality variables which affect attention*

Here I would like to point to a popular distinction between two types of individuals, those who are extroverted and those who are introverted. Extroverted individuals are more tuned to their external environment while introverted individuals are more inwardly tuned. Extroverted pupils desire more variety and change than do introverted ones, thus they prefer a faster rate of presentation (c. f. *Cheek*, 1977; *Eysenck*, 1971)[10].

A change in the style of presentation or its speed even within a program segment has a stimulating effect on extroverted pupils. Such fast-paced changes have an unfavorable effect on introverted pupils. They prefer longer program segments and slower paced speech. But, in contrast, extroverts require more encouragement and become more easily bored.

What conclusions can we draw from these individual differences that would be useful for program development? Since one cannot please everyone, two possibilities remain. One could choose an average amount of variety, but this may be experienced by both personality types as mediocre. Alternatively, one program could be addressed specifically to the so-called extroverted type while another would be geared to the introvert. A different solution is presented by *Rahmlow* and *Langdon* (1977)[11]. They refer to the existing technical capability to adapt the speed of presentation to the needs of the individual. The so-called Copycorder has presentation speeds ranging from normal to 2½ times normal. Here each pupil can choose his own personal tempo.

At this point, I would like to examine with you how an individual's voice affects other people's judgement of him. By the way, the speech tempo plays an important role here.

3. *Auditory person perception*

Many individuals are known to us only by their voices. That has been primarily the result of telephone and radio. What impressions are made on the listener by an invisible speaker? What inferences does the listener make about the speaker independent of the content of the message?

This question was first investigated by the BBC. During a broadcast in the late Twenties, listeners were asked to rate nine speakers according to a variety of characteristics[12]. Gender and age were generally judged most accurately. In response to the question about the profession of the speaker, the actor and the clergy were most frequently identified correctly. In the case of some speakers, many listeners agreed on the profession, all guessing the same but *incorrect* occupation. There apparently is something like a voice stereotype for occupations. There are other characteristics of an individual which are inferred on the basis of voice features. If someone speaks slowly, he will be judged to be indulgent but less competent. In contrast, a fast paced speaker creates the impression of high competence[13]. Aside from speech tempo the variability of accentuation also affects the listener. For example, there is a relationship between the degree of accentuation and success in school. Children who receive better grades also show a more articulated accentuation than their less successful schoolmates.

A recently published study (*Scherer* et al. 1977)[14] attempts to assign weights to specific voice features involved in person perception. Furthermore, these investigators wanted to determine to what extent visual information influences the judgment of a person. The judgments were obtained under different conditions. When presented with normal speech, there was a high degree of agreement in the judgments of personality characteristics. This judgment is based primarily on voice pitch and less on the speech rhythm. Pitch is also a more determining factor for the impression of a person than is a photograph of the person to be rated. This surprising result led the investigators to the following question: Does it make sense to require photographs of applicants for jobs or dating services? The authors even go so far as to say that photographs have a detrimental effect on person perception. That would mean that personality traits, which are correctly identified on the basis of auditory information, are less accurately determined when photographic material is added. However, moving pictures are seen as having positive value. The main finding of this study is that *voice features* play a dominant role in person perception.

Finally, there are a number of studies dealing with voice features and moods, e. g. mourning, joy, anger (*Davitz* and *Davitz*, 1959)[15]. Here again it was found that errors in judgment deviate systematically and not randomly from the true mood of the speaker. Thus a frightened voice frequently creates the impression of a nervous person, while a person speaking in an affectionate voice is perceived as being sad. Undoubtedly, this phenomenon is of some importance in the assignment of roles to various speakers.

4. *Internal representations: The significance of mental image variables in radio broadcasts*

I now want to turn to a human capacity which I consider to be extremely important in radio broadcasting in general and in school radio in particular, namely mental images.

For centuries, philosophers and psychologists have studied the ability to form mental images. That has not exactly made the topic an exciting one. However, most recently the concept of mental image has experienced a revival thanks to an author named *Paivio*[16] whose veritable flood of articles has forced educators and media practitioners to take notice.

Paivio asks the question, how do we store in our head the language which we hear? His answer is, partly by means of a linguistic-abstract code and partly by means of a visual-pictorial code. For example, you hear the sentence: "The clown pats the child". According to Paivio we are able to retain this sentence because it elicits a pictorial image, and furthermore, because we use a rather abstract memory for speech contents. Paivio calls this process dual-coding, i. e. events are dually coded in a pictorial and abstract verbal code. In this way events have a higher probability of being retained in memory than if they were singly coded. Paivio demonstrates that this is indeed so by using examples like this: Compare the instructions for building a house with a treatise on the social justice of the distribution of wealth. In one case we are dealing with a pragmatic, concrete matter but in the other with a rather abstract one. If after some time one wishes to recall the content of both texts, retention will be higher for the concrete than for the abstract one. According to Paivio the reason for this is that instructions for building a house elicit more pictorial images than does a text on social justice.

The verbal coding of abstract content is not sufficient to permit good retention. However, according to media practitioners it is the less "intuitive", rather more abstract subjects, like politics, religion and social studies which best lend themselves to dissemination via school radio broadcasts. Does that contradict Paivio or does it speak against established practices in school radio broadcasting? To be sure, one needs to consider a whole series of other findings. It has been shown, for example, that children who are expressly told to form mental images are better able to retain messages than those who are not so instructed. *Older* children benefit more from this than do younger ones. The reason for this is that older children are able to form dynamic images while the mental images of younger children are fixed or static. Therefore, younger children are particularly dependent on verbal instructions (c. f. *Kulhavy* et al. 1977)[17]. The younger child requires a concrete example. One might accompany the concept of justice with the pictorial image of two equal-sized slices of pie, one for brother, one for sister. That instructs the child about *what* image is to be formed. As we said, retention is most facilitated by dynamic images. Hence, for example, a picture of the two siblings eating the pie.

I am unable to provide you with a conclusive evaluation of mental image capacity because, on this question, developmental psychologists have diverse opinions. Nevertheless, I am convinced that pictorial images play a determining role in human behavior and human thought. Like no other medium, radio and particularly school radio is capable of facilitating the formation of mental images among young people and thereby positively influencing their cognitive development. On the one hand, radio broadcasts are dependent on the listener's ability to form mental images, but on the other hand, they can also arouse and improve the imaging capacity of the listener. That is an inestimable privilege which is denied to the audio-visual media. I will try to show this later. For now let me summarize under four points the large number of experiments on mental image capacity (c. f. *Fleming* 1977)[18]:

a) If verbal messages are accompanied by mental images they will be retained better than without such images.

b) Messages about concrete matters are more likely to give rise to spontaneous mental images than those with abstract content.

c) Retention of abstract subject matter is improved by visual images.

d) Children need to be instructed to form mental images. One must be sure that the imaginative child forms an image which is appropriate to the verbal message.

It goes without saying that here again individual differences must be considered. There are unimaginative individuals and those who have vivid mental pictures.

5. *On the interaction of visual-pictorial and auditory-verbal messages*

Questions concerning the characteristics of visual and auditory information processing are of considerable importance to a discussion of combined media. The answers have been contradictory. Let me just give you a few examples. Auditory processing, according to *Hsia* (1968)[19], requires a higher degree of attention and results in less fatiguing. Conversely, visual processing requires less attention but increases susceptibility to fatigue. *Cheek* (1977)[7] characterizes the sense modalities in an exactly opposite manner to Hsia. Furthermore, he assigns visions to a superior position over audition. By the way, he lists 36 words for characterizing visual perception, while the characterization of auditory perception is limited to 10 words. This is a typical example of comparisons between eye and ear. One proposition for which there is considerable agreement is that the eye can process more information per unit of time than the ear. Advocates for the superiority of the eye are as numerous as those for the superiority of the ear.

Looking over this literature one cannot help but get the impression of different detergent companies extolling the virtues of their wares. Perhaps the reason why the supporters of visual superiority have won the upper hand is that our eyes are in the middle of our face while the ears are rather unobtrusively on the side of our head. But in this discussion we are not concerned with the competition between pictorial and auditory-verbal information. Rather we are faced with the question of how pictorial material might function to supplement school radio broadcasts. I shall restrict myself primarily to static pictorial material. To begin with, we encounter a very basic question. If *Broadbent's* (1958)[1] filter theory is correct, a pupil is able to process *either* visual *or* auditory information, but not both at a particular point in time. This assumption would speak largely against the use of pictorial material. Similarly, *Levie* and *Dickie* (1973)[20] discourage the use of illustration at least in the production of reading books. They also point out that younger children particularly are unable to translate pictorial content into speech. Younger children have more difficulty *understanding* pictures than is generally assumed. That reading has to be learned is obvious, but that the child must also learn to "read" pictures appears to be less obvious. For example, young children are hardly able to recognize dynamic elements, as such, in pictures. They are also not able to extract cues to depth, i. e. perspective cues, from two-dimensional pictures. Furthermore, it is the less intelligent children who encounter greater difficulty in the systematic analysis of a pictorial presentation. Their eyes remain rather fixed on a point while the more intelligent children scan the entire picture.

For these reasons a number of studies agree on the following conclusion. Young children, children who can barely read or who read poorly, as well as those showing mediocre academic performance, are aided more by auditory broadcasts without pictorial supplements. In contrast, older children with good academic performance can benefit from a combination of auditory and visual presentations. Of course this is true only with some constraints. An important factor influencing the effectiveness of visual material in conjunction with school radio programs is the amount of information which the eye and ear are required to take in. If many different bits of information are to be processed simultaneously they are likely to interfere with each other, resulting in a decrement in the processing of both. Therefore, there should be a high redundance between the pictorial and verbal materials, facilitating, as much as possible, an uninterrupted processing of the information. Furthermore, the effect of imaging capacity must be taken into consideration.

Mental pictures or visual images are most likely to occur when pictorial representations are *absent*. Looking at a picture inhibits the ability to image. This should be taken into consideration when pictorial materials are used. The decision for or against supplemental pictorial materials is therefore tied to the following consideration. Is it our aim that all pupils form an identical image of the object to be examined? If so, then a pictorial presentation is appropriate. However, if the aim is to facilitate the student's active involvement with the subject matter, then we can easily dispense with pictorial supplements. The so-called private images of the child will facilitate retention of the instructional unit far better than any printed material. However, here we must point once more to personality differences. There are pupils who learn more easily by means of visual information and others who benefit more from auditory information (*Ingersoll* 1970, cited in *Levie* and *Dickie*, 1973)[20].

In summary let us keep the following points in mind:

a) At the time the child enters school his auditory capacity is superior to his visual capacity. That is why young children learn better through auditory-verbal presentation than through pictorial ones (c. f. *Carterette* and *Jones*, 1967)[21]. This contradicts those developmental theories according to which the child learns to understand the world first through pictures and later through speech (*Bruner*, 1971)[22].

b) Because learning to read places high demands on the eyes, capacity for *visual* perception increases rapidly. A ten year old child has the perceptual capacity of an adult. The use of supplemental pictorial materials at this age level makes sense. But their effectiveness depends on two further factors:

c) Viewing pictorial material inhibits the formation of images.

d) There must be a high degree of congruence between the visually and auditorily presented information, otherwise there will be competition between the two sources of information leading to mutual inferences.

This shows that in selecting supplemental pictorial materials one must take into consideration aspects of developmental psychology, particularly those related to the question of the formation of images.

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Hertha Sturm

Issues in perception and attention in relation to the reception of radio broadcasts: Implications for school radio broadcasting

"Perception and attention": *Sabine Jörg* has pointed to the problems and possible explanations reflected in the present status of research in this area. It is now my task to attempt to apply some of these findings to issues related to radio broadcasting, more specifically to school radio broadcasting.

Ms. Jörg spoke about the selection of environmental stimuli which all of us carry out. We are dealing here with the selection of acoustical stimuli carried out by the listener of a radio broadcast. One issue which is highly significant to school radio broadcasting is that the younger the listener the more difficulty he will have in separating the relevant from the irrelevant, in filtering out the important acoustical stimuli from the less important ones.

Concretely this means that one should carefully consider which sounds to employ and which sound one intends to be perceived by the listener regardless of the circumstances. If the aim is that the listener will be able to identify certain sounds, to recognize them when they occur under different circumstances, then these sounds should be perceivable in a clear manner free of interference. Here much depends on the skill of the producer. If he wants to portray an acoustical scene realistically, say the sound of a particular machine in a factory, then he must make sure that his machine sound occurs isolated from other sounds at least for some period of time.

It is also useful if the producer of school radio programs knows how to call the listener's attention to those things which are particularly relevant. This by all means could include supplementation with verbal cues. This much has been shown by the research data: when the listener is confronted with new, unfamiliar material he does not "know" *a priori* on what to focus his attention. Under certain circumstances he may perceive something which is totally irrelevant to the presentation.

This insight leads us immediately to the second research finding. The individual always attempts to make sense of what he perceives, to put it into a meaningful context. If the meaning is not immediately apparent, he will construct his own meaningful context. Or, to put it differently, the individual has certain expectations and hopes to find these expectations confirmed. If, for example in a school radio program some expectations are not confirmed, or if erroneous or irrelevant expectations are elicited, then the entire program may take on a different meaning although many details can be recalled correctly. The ability to recall, to label details, is in itself not necessarily an indication that the total presentation has been understood.

It seems appropriate to me to discuss the formal development of intelligence of the growing child which has relevance to radio broadcasting as well. My discussion is based on the developmental stages of intelligence according to *Piaget*[1]. The stages have been confirmed in almost all parts of the world, in Switzerland as well as the USA, in Australia as well as Africa. The assumption is that the content of a presentation can be classified according to the development of formal logic, the intelligence stage of an individual. There may be totally different subject matters, but it is the stage of formal logic which guides the perception.

It would not be appropriate for me, in the framework of this discussion, to present the detailed findings reported by Piaget and his students. However, this much is relevant to the school radio practitioner:

We must understand that the growing child is constantly expanding and articulating his perception span. What is difficult to perceive and to understand for a six year old does not have to be at all difficult for a twelve year old. We all know that. But do we know why, and for what age groups, a particular presentation is too difficult, too complex, or perhaps even too easy to be understood in its totality? I think we have some indications here. Again, I'm following Piaget who, it is true, bases his finding on non-media-related situations. What I shall do here - and what is also the focus of research of the Internationales Zentralinstitut – is to apply Piaget's findings to the structuring of radio and television presentations[2].

Piaget talks about a stage of "representational thought" which characterizes the age group from about four to seven years. Piaget found that four to seven year olds are quite able to perceive and understand a great deal, but chiefly those things which are presented single-mindedly and in a unidirectional manner, one thing concretely leading to the next. It can be said that at this age children attend only *one* aspect. It is asking too much to require them to attend two, three or more aspects. Concretely this means that, for this age level, a story should be told from *one* perspective, perhaps that of the story-teller, and should progress in an orderly fashion. Fade-ins and fade-outs, flashbacks and flash-forwards, are difficult to comprehend and lead to potential misunderstandings.

At about age eight the child reaches the stage of concrete-logic operations. Now the individual is capable of attending several aspects at the same time. It is now possible to present to him a family argument or an event from the past from different perspectives, provided however, that the different positions or events can be labelled concretely. Still following Piaget, it probably does not make sense to bombard a child between eight and eleven with abstract concepts. To me it seems important that, for this age group, stories become more articulated.

Finally, at about eleven or twelve, the child begins to think abstract-logically. Step by step the individual attains a level of independence from concrete, reality-related signs. Now an X in algebra can designate a variety of things, apples, pears or a road distance. For radio dramaturgy this implies that one no longer needs to present everything concretely. The listener is now able to follow an abstract line of thought, to be sure usually only if he is able to relate it to something concrete, something that can be labelled, something he already knows.

These references to Piaget's model were given here because they are in fact related to the question of what and how the individual perceives. If the structural level of presentation is too high the listener will simply select what he already understands and turn off the more difficult passages. But we may get the same results if the level of presentation is too low. The individual becomes bored and likewise turns off.

So much for the structural side of the media presentations. I now turn to the question of content.

To begin with, we are aware that the recipient has particular difficulties following subject matter which is as yet unfamiliar and unknown. One should therefore try to establish a relationship between the unknown and the familiar. After all, we are dealing here with the didactic insight which is undoubtedly true, that the highest level of attentive perception occurs when something known and something unknown come together. By the way, I intentionally speak of didactic insight because the producer of school radio programs is in fact a didactician.

Reflections of this kind have meaning for school radio broadcasting and the theories behind it. For a long time school radio was viewed as expanding on and providing depth to classroom instruction, making it come more alive. Expressed differently, school radio programs were seen as enrichment, as an expansion and enlivening of classroom instruction. But as individual school subjects became more and more "modern", school radio became more and more the teacher of those subjects. But if it is a part-time teacher for certain subjects then it cannot avoid giving special consideration to the structural aspects of its listener's stage of intelligence and his previous knowledge of the subject matter. This presupposes knowledge about the target group for which a particular program is produced.

Permit me to point to something which school radio cannot do in the field of cognitive learning, which is what we are talking about. Surely, instructional broadcasting cannot provide 'programmed instruction' or facilitate programmed learning. Here again I wish to tie in with something that Ms. Jörg has said, and that is that perception and attention are not fixed qualities, rather they are subject to individual differences, dependent on an individual's interest, his intelligence, his background, his mood, etc. It is true that school radio programs can to a large extent be tailored to a particular target group, to eight or twelve year olds, to students in elementary school or those in senior high school. It seems to me that this is our medium's big advantage. It is also true that media effect research has shown that age plays a determining role in attention, perception and comprehension[3]. Nevertheless, school radio which is part of a mass medium cannot respond to the needs of different individuals within an age group. Among its listeners there are always intelligent and less intelligent pupils, the only child and the child from the large family, extroverts and introverts, listeners with totally different interests and experiences. Programmed instruction, however, functions by adapting to the appropriate cognitive stage of a particular individual. The programmed text or the teaching machine advances to the next step in the program only after the prior problem has been understood and solved. If the particular problem has not been solved the learner is referred to earlier steps in the program. Thus the programmed text or the teaching machine is geared to the previous knowledge of the individual, to his personal learning speed. School radio cannot do this, unless one actually were to design a special program for each pupil.

Aside from the cognitive aspects of perception and attention, the emotional and dispositional aspects also have significance in this context. Undoubtedly, this includes the experience of hearing a human voice.

As you heard earlier, the listener is quickly able to assign particular qualities to a human voice which are then attributed to the person behind the voice. One can assume that the assigning of attributes is, in the first instance, based on emotional and dispositional factors. That is why one should pay particular attention to this emotional component.

I have good reasons for saying this, and I will tell you why. In 1971 my colleagues and I carried out a comparison between radio and television media. It involved a 45 minute panel discussion program with five discussants. This was presented either as a radio program, the discussion without picture, or as a television program providing both sound and picture. The subjects of the study were students in their second semester at the University of Freiburg. Here I don't want to go into all the undoubtedly important details of the study, you can read these elsewhere[4]. What we wanted to find out was this: What cognitive, testable knowledge is mediated by radio and television, and how does that knowledge change, what is retained or forgotten in the space of three weeks?

What was new in this investigation was that we also measured the emotional, dispositional impressions elicited by the individual discussants and the overall program. This was also done immediately after the program and one, two and three weeks later. A multiple-choice questionnaire was used to determine the level of knowledge conveyed by the radio or television version. The emotional impressions were determined by means of the Impression Differential, an instrument designed by *Ertel*, which is based on *Osgood's* Semantic Differential. These instruments assume, and the assumption has been varified, that emotions can be described and measured along three dimensions, the activity dimension, (I find someone – or his voice – "exciting" or "dull"), the evaluative dimension (I "like" or "dislike" someone), and the potency dimension (I experience someone as "mighty" or "subserviant").

Here is the surprising finding of our study: We found that the knowledge which was mediated by radio and television was forgotten much like one forgets other messages, the content of a newspaper item, of a play or of a lecture. At first forgetting is rapid and then it slows down. In essence what we found was *Ebbing-*

haus' old forgetting curve from the year 1882. However, the emotional impressions which the listeners and viewers attributed to the individual discussants or the overall program remained unchanged over the three-week period. Emotional impressions showed no extinction, no forgetting. That indicates to us that emotional impressions remain, although what was said by the individual speaker has long been forgotten.

On the basis of this study we concluded that emotional impressions appear to be that which is media specific. In the case of radio it is the emotional impression created by the voice, and these enduring emotional impressions are analogous to emotional bonds.

You might, of course, object by saying that we used 22 year old students in our study and not school children. But it is my feeling that with all that we know about psychology it is quite likely that children and youths would react rather more emotionally sensitive than tough university students in their second semester.

How could this finding be applied to school radio? First, I don't think one should hesitate to repeatedly use particular speakers in particular roles. Because child psychology and developmental psychology have also taught us that the younger the child is, the more he desires emotional security, a voice which he knows and which he can trust. At the primary school level it ought to be of particular importance that the listener can in a way depend on and trust in a voice We know from our own experience that we require a certain amount of emotional stability in order to venture into something new, to add to or modify our knowledge. The re-appearance of a familiar voice in a particular role (moderator, storyteller, questioner) undoubtedly is able to convey some measure of emotional security, at least at the primary school level.

Talking about emotional security, I would like to point out that the classroom teacher has a particularly significant role to play. Normally, school radio programs are heard by the pupils in the classroom setting. Thus the pupil finds himself in familiar surroundings. The receptive situation is emotionally relatively stable. This condition should not be underestimated.

I now turn to the last point to which I wish to address myself, that is the significance of forming images. Here we find the crucial difference between radio and television. Ms. Jörg referred to the notion that events are dually encoded, pictorially and verbally[5]. Regardless of whether one accepts this notion or not, it is surely true that the basic difference between radio and television is that the latter provides 'the picture' but radio requires formation of one's own images. Accordingly, it ought to be considerably more difficult to form one's own images *during* a television program than would be the case during a radio program. Television requires after all that we follow the predetermined pictures. The high speed of television, its fade-ins and fade-outs, its cuts, splices and zooms rarely leave time for forming one's own images during the presentation. Radio is different in this respect. Of course, the radio broadcaster should be aware that radio programs can be presented too rapidly as well. Here, too, we require pauses if the aim is to develop idiosynchratic mental images. Now, that does not mean that radio broadcasts, in this case school radio broadcasts, should proceed at an excessively slow speed. However, the producer of school radio programs, if he wishes to facilitate mental image formation in his listeners, must give consideration to the identification of segments which can be speeded up and of others which must be slowed down and where a pause would be appropriate. A sudden change in the speaker's pace of speech might be a means to increase the listener's attention.

Why is this formation of images so important, and why should school radio broadcasting make a contribution to it, for all age groups and all subject matters? First we should give thought to the fact that there is television as well as radio broadcasting. Aside from school radio broadcasting there also is, in many places, school television. Television delivers many concrete pictorial prototypes into school and home. It can make significant contributions to the dissemination of factual information, e.g., how a factory operates. Television programs, like school radio broadcasts, can portray an interesting conflict, e.g., a conflict among members of the family or a group of friends. However, what the viewers and listeners experience is not something which they will experience in the same way within their own reality. Listeners and viewers are not likely to encounter the same factory or deal with exactly the same conflict. All media presentations require transformation from what is heard and seen to another, personal reality. In order to carry out this transformation one needs, however, one's own mental images, a step by step detachment from what is presently shown in the here and now.

As far as this formation of one's own images is concerned, radio is undoubtedly in a much freer and better situation than television, just because no picture is being delivered and the listener is forced to carry out the transformation. This is true of a simple, unidirectional story for six and seven year olds, even if it is graphically told. But it is just as true for presentations containing several concrete aspects geared to the next higher age group. It surely also applies to the sketching of an abstract notion as this becomes feasible after age eleven or twelve. By generating his own mental images the recipient is able to free himself from the restrictions usually placed upon him by pictorial presentation, and enabling him to add his own experience to the process. It seems to me that school radio broadcasting should make use of the opportunities it has as a single-modality, auditory medium.

References and notes

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Sturm, Hertha: The application of Piaget's criteria to television programmes for children. In: Information programmes for children 7 to 12 years old. European Broadcasting Union (Ed.). Geneva: EBU 1977. pp. 12–19.

[3] There are a number of studies available. Literature related to the subject matter can be found in:

Roberts, Donald F.: Communication and children. In: Handbook of communication. Pool, Ithiel de Sola (Ed.) et al. Chicago: Rand McNally 1973. pp. 200 ff.

[4] *Sturm, Hertha; Haebler, Ruth von; Helmreich, Reinhard:* Medienspezifische Lerneffekte. München: TR-Verlagsunion 1972. 96 pp. And *Sturm, Hertha; Holzheuer, Katharina; Helmreich, Reinhard:* Emotionale Wirkungen des Fernsehens – Jugendliche als Rezipienten. München: Verlag Dokumentation 1978. 128 pp.

[5] *Paivio, Allan:* Imagery and verbal processes. New York: Holt, Rinehart and Winston 1971. XI, 956 pp.

[6] *Sturm, Hertha:* Die kurzzeitigen Angebotsmuster des Fernsehens. In: Fernsehen und Bildung, 9/1975/1, pp. 39–50.

Franz Merdian

Issues in perception and attention in relation to the reception of radio broadcasts:

The subjects dealt with by the working groups

The papers by *Dr. Sabine Jörg* on "Issues in perception and attention: The present status of research" and *Prof. Hertha Sturm* on "Issues in perception and attention: Implications for school radio broadcasting" were followed by a discussion in five working groups.

The topic "Perception and attention" attracted a keen response from the participants of the European School Radio Conference. This firstly became evident in the number of questions stimulated by the papers. The different aspects of perception and attention, it was proposed, should be discussed and analyzed with reference to concrete working examples together with editors and authors of school radio programmes at a meeting organized specially for this purpose. This was the express wish of a large number of the participants.

The working groups discussed the following questions:

1. *Interference between language and picture*

- How do language and picture, representations (as accompanying material) and texts affect one another?
- For what topics should picture material be provided in addition to the broadcast?
- What type of pictorial representation should be used?
- Should the picture material be used before, during or after the broadcast?

There was a considerable demand for more precise information. It was emphasized, however, that it was difficult to make general statements on the relationship between language and picture because it was also basically a question of what didactic aim was to be achieved.

2. *Imagination*

School radio is able to stimulate and make use of children's imagination to a far greater extent than school television. Realized pictures often fall well short of what we are able to visualize in our imagination. It was emphasized that a decisive possibility open to school radio, indeed to radio broadcasting as a whole, is in the sphere of imagination.

When producing radio programmes, advance consideration should be given to what ideas ought to be stimulated, how to prevent ideas which although they suggest themselves are not wanted, and how to illustrate abstract subject material.

In view of the function of the other media, helping children develop their faculty of imagination is considered to be a particularly important task of school radio.

3. *Learning to listen*

School radio is able to train children to "listen" and to generally practice the assimilation of information. The question of "mass media literacy" was raised in connection with this aspect of exercise in the reception of radio broadcasts.

4. *Broadcast endings*

Hertha Sturm's paper was directly followed by a discussion of the emotional effects and after-effects of "open-ended" school radio broadcasts on children. On the one hand, an "open-ended" broadcast, which leaves behind an element of suspense in the child recipient and stimulates his activity, was thought to be desirable for use in class instruction but undesirable in cases where the child recipient hears the broadcast alone due to the possibility of the suspense induced being too pronounced. It was suggested that a compromise should be made and "finished" programmes broadcast with recommended stopping points for use by the teacher during instruction.

5. *Target group*

In contrast to other categories of radio broadcasting, school radio possesses accurate information about its target group, namely details on age group and subject material in question. It can therefore produce programmes specifically for its target group. Since it is known that the most important feature of personality influencing perception is age, it is possible for school radio to give special consideration to the developmental factors of the process of perception.

6. *Relationship between scientist and practitioner*

Various participants were induced by the contributions made by the scientists to raise the question of the relationship between research and practice. The researcher, it was realized, is not able to supply blueprints for action or give the practitioner a clear "go ahead" in specific cases, but he can observe and make constructive and corrective proposals.

In addition to the topics referred to above, discussion in the working groups focussed repeatedly on the specific possibilities of school radio in contrast to school television: greater integration of the listener; the production of regional programmes; greater flexibility within the multi-media system, where radio can produce without much trouble broadcasts complementing television programmes, books or magazines (for instance, according to the French example, see page 40).

The lecture given by Meri Riuttu, Head of the Foreign Language Programmes Section of the Finnish Broadcasting Corporation (Oy Yleisradio), serves as an introduction to the theme from the point of view of a media practitioner. Ms. Riuttu chaired the half-day plenary session on 'Foreign Language Teaching and School Radio' at the conference.

Meri Riuttu

Foreign language teaching and school radio: Foreign language programmes on the radio

In a number of European countries, recent years have seen the emergence of oral understanding and learning to speak as primary goals in modern language teaching – with reading, writing and textual comprehension having only secondary significance.

Of these five skills, oral comprehension has, until quite recently, received least attention. Although there has been much talk of language as a medium of communication, and the importance of speaking abilities has been stressed, the fact that any communication must be based on oral understanding seems to have been forgotten. This understanding does not develop automatically when practising the other skills, but requires separate training, which should be started as soon as possible – already at the beginner level.

In the development of oral comprehension ability in a foreign language, radio and TV can render first-rate assistance in classroom teaching. Although many study books nowadays are accompanied by recorded tapes and even by material for drilling the spoken language, it is generally in connection with a familiar text and theme, and often read by familiar voices. Radio should train the student's comprehension of the spoken word, without the support of a text, and at the same time give stimulus for the student's own speaking practice. The programme resources of broadcasting companies, their contacts with foreign radio and news centres, the possibility of using native-speaking professionals as script-writers and performers, and access to sound, record and sound-effects archives, combine to make radio (and TV) unequalled in the production of this type of programme.

Oy Yleisradio has produced such talk programmes for listening comprehension for about 15 years now, but it is only during the past few years that they have become established study material in Finnish schools. Programmes are at present produced in five languages: English, German, French, Swedish, and Russian, and the programme realization often takes place in the countries in question.

When planning the programmes, one must naturally take into account the students' ages and capacity, as well as their hobbies and subjects of interest. All means of expression open to radio as a medium are used in programme production. The subject matter, content, form, and tempo of programmes are selected with due consideration for the student's knowledge of a language and stage of development, but in their wealth of choices for subject material, language programmes mirror other radio programmes, a veritable cornucopia. But it is always necessary to keep in mind that the information presented in them should be topical and relevant. Thus the radio, being essentially "current" media, can keep the study books up-to-date.

The programmes have been shown to have considerable significance with respect to learning motivation; the student realizes that the language under study really works as a means of communication, albeit on a modest scale at first. In programmes for lower forms, the aim is particularly to give stimulus and variety to the teaching, in the form of songs, games, and dramatizations. One example presented in Munich was the programme 'Hear here, fair hare' from a series titled 'It makes sense'. The programmes deal with our five senses which are subjects of small dialogues, songs, and games in which the pupils actively participate when listening. The programmes are suited for integrated teaching, as they comprise elements of English, music, physical exercise and pictorial art. Many programmes also include exercises to be done during the course of the programme itself. Radio does not demand other senses than that of hearing, but drawing, moving, or singing in a foreign language lend themselves easily to integration, for example by widening knowledge of art, music and other pursuits in the course of language learning. More advanced students can listen to news and current affairs programmes, speeches, radio plays, discussions, interviews and debates, which can simultaneously acquaint the listener with the customs, environment, society, and culture of the country concerned. The combination of listening comprehension and awareness of cultural differences in language was the overall objective of our series 'Learn to listen', directed to more advanced students of English in secondary schools. From this series I presented the part 'Separated by a common language' in which, in the form of a humorous sketch, a British and an American student had difficulties in understanding each another due to different idiomatic expressions in everyday English. In the later stages of secondary education, it is already possible to present programmes for discussion, with the accent on authenticity, and the intention that they should arouse in the students a desire to take a stand and comment spontaneously.

One form of radio programme also suited to language teaching is radiovision, combining slide-transparencies with the radio material. The organizers of the conference had been fortunate to win two experts most experienced in this matter, *Dr. Charles Armour* and *Raymond Escoffy* from the BBC. They gave a comprehensive insight into the development of this media combination and its multiple uses in foreign language teaching over the last years.

It was demonstrated that radiovision is not only a more economical solution than the use of TV, and more flexible in use, since most schools possess a projector, but that it facilitates understanding by visually depicting a situation. Some subject areas particularly require visual back-up, for instance geography, natural sciences or pictorial arts, and it does also give support to the presentation of historical and social subjects. Why is it then, however, that few radiovision programmes are really successful in synthesizing both the oral and visual elements into a harmonious whole. Sometimes it is the oral component that does not function as a proper radio programme, sometimes the visual element plays a secondary role. Or is this failing only true of language programmes, whereby the spoken word and the consideration of its expression is extremely important?

The use of radio programmes has been described above as a source of stimulus for listening and speaking, complementing traditional teaching methods. It is clear that the possibilities of using radio in language teaching are not limited to this. Language courses for adults have been a part of the radio repertory almost as long as it has been in existence. The models were thus ready when radio was required to take the teaching of foreign languages to where it previously had not existed, for example in the Nordic countries at the beginning of the 60's, in the lower forms of the comprehensive school, where teacher resources were at the outset insufficient. The Swedish Radio's "Let's start" course, which was subsequently adapted for Finnish use, did pioneering work in the field and had an innovative effect upon the form and content of beginner-level English teaching. The combination of radio's heightening of effect, its sound pictures, with the pictures in the course book, created a dialogue which functioned like a language laboratory. The students reacted to the pictures and the oral stimuli, they repeated, answered, and produced their own speech (often pronouncing better than their own "amateur" teachers!)

This sort of teaching has now in Sweden been extended to embrace television, and been formulated into the completely integrated multi-media course 'Switch on', a beginner's course in English for 3rd grade students in comprehensive schools, which was presented by *Margarete Hallberg* from Sveriges Radio. All parts of the course, radio, TV, and study books, play an equally important role, but all serve to closely complement one another. Television has not brushed radio aside, but the special roles of radio and TV necessitated careful analysis in the planning of the course. The task of the TV programmes is to get students interested in the subject matter by introducing the content and by summarizing the work, while the radio establishes and further develops the material introduced by the TV programme.

Even financial restrictions of the budget for TV productions may give new significance to radio courses for foreign language instruction. This was touched upon in connection with Prof. *Manfredo Patocchi's* presentation of 'La Bataille de Hastings'. Here an original film series on famous historical battles was bought by the Italian speaking Swiss radio station, TSI, in France, and used to provide pictorial stimulus material in school TV, to be followed up by intensive explanations and exercises in a school radio series. Again, oral comprehension of an original film commentary and the understanding of special vocabulary related to cultural and political history was promoted best by radio material.

So far, however, we know comparatively little of the effectiveness of TV in the teaching of a foreign language. At this stage it is best to content ourselves with the affirmation that both media have their own characteristics and that, if simply superimposed on each other, they constitute foolish spending. On the other hand, skilful integration of the two media is in some cases certainly useful, if the schools' equipment facilities, the question of authors' rights, or other considerations, do not put the two in positions of different value in practical use. And since every programme should simultaneously educate the user towards a critical consumption of mass-media, it can never be right in multi-media productions to push aside one medium in favour of another – both are of equal importance. In addition, the pedagogical aspect of the programme should be blended in the programme in the way demanded by the medium. Only under these conditions can we on our part enrich the teaching material and make it more varied, thus rendering language teaching in schools more alive in its character and content.

Two methods of acquiring a foreign language are discussed here. The first method is the one proposed by the Dutch researcher Prof. Dr. Carel van Parreren, which gives special consideration to the findings of Soviet linguistics. The second is the method being studied at the University of Kiel, and is treated here by Prof. Dr. Sascha W. Felix. The latter proceeds from the acquisition of language during infancy, which evidently takes place according to certain regularities.

Despite basic differences between the two methods they have one thing in common: the importance of listening and understanding in learning a language. Accordingly, school radio has an important role to play in providing a wide scope of authentic foreign language material.

Carel van Parreren

Foreign language teaching and school radio: New research findings in foreign language teaching

The learning of a foreign language demands a series of partly very different yet interconnected learning processes. There are many reasons for this. I should like to mention four of them.

Firstly, the command of a language – a foreign language included – entails various skills. We can distinguish for example between the skill of speaking, the skill of listening and understanding, the skill of reading, the skill of writing, and perhaps even other skills. It is generally known that in learning a language these skills are not automatically developed parallel to one another, and that people using foreign languages can vary considerably in their command of each of these four skills. Each skill demands its own learning processes and its own conditions for these learning processes. The second reason why the learning of a foreign language is a complicated matter is connected with the first and is that the learning aims can be very different. One such aim is verbal communication in everyday situations, or the ability to read a foreign language, in some cases restricted merely to technical literature in a special field of knowledge. These varied aims partly require different learning processes.

Thirdly, a foreign language is mostly learnt in a teaching situation rather than spontaneously or quasi-spontaneously in surroundings where the foreign language is spoken. As a result, the teaching conditions – implementation of the course, attitude of the teacher – considerably influence the course of the learning processes. This factor can also affect the complexity of learning a foreign language.

The fourth and final reason is that the processes which take place in the course of learning a foreign language are complicated, because the acquisition of the language is not continuous but occurs in different phases. Other learning processes can gain priority in each of these different phases.

In view of this complexity and the fact that a successful psychology of teaching has only recently been developed on the basis of the psychology of learning (formerly there was only a psychology of learning, today we have a psychology of learning and of teaching), in view of these facts it is not surprising that research in the fields of psychology of learning and of teaching can as yet hardly cope with the tasks assigned to it by foreign language didactics. Nevertheless, there have been decisive changes in the method of teaching foreign languages during this century. In some cases, the impulses for these changes came from the psychology of learning or the psychology of language, but they were rarely backed by reliable research findings. Mostly, it was a question of specific assumptions or conjectures which prevailed at certain times in these disciplines and stimulated these changes. Linguistics and research in learning processes has accordingly only had a limited and by no means consistently favourable influence on the methodology and didactics of foreign language teaching. Other influences have been, for example, technological development – the invention of the tape-recorder, the language laboratory, etc. – and, primarily perhaps, practical experience itself. In the course of this century, practitioners have experimented quite extensively and come forward with new suggestions in foreign language teaching.

These are some of the reasons why foreign language teaching has changed so much. On the other hand, it must be taken into consideration that a) virtually no change in teaching methods has been systematically examined; various methods have been used, but there are scarcely any exact research findings demonstrating that certain methods are clearly better than others; that b) many changes have been introduced without due consideration of the psychology of language and the psychology of learning; that c) on the other hand, findings from experiments which developed completely differently have been generalized on too hastily; and that d) precisely in this century there was a lengthy period, which I mostly refer to as the dark age of behaviourism, during which the psychology of learning hardly approached the question of human learning. How rats learn was apparently much more interesting to the psychologists.

Having considered all this, it is not surprising that foreign language teaching has not only undergone changes in this century, but that it is also taking a zigzag course. Roughly three major phases can be distinguished in this partly complex historical development. The first phase, which incorporated a teaching method still prevailing at the beginning of the century, is generally referred to as the grammar-translation method. This was followed by a phase which still persists in many places today, the drill phase, the phase of habit formation. Finally, we can observe the beginning of a new phase, which I should like to call the cognitive reinforcement of foreign language teaching. I shall present a brief survey of these phases and their characteristic features.

The basic idea of the grammar-translation method was that the best way to learn a foreign language was to take the mother tongue and to simply construct the foreign language by translating from the mother tongue. With regard to word-for-word translation, this method operates with lists of vocabulary in two languages. The pupil learns pairs of words formed by a word from the mother tongue and its counterpart from the foreign language to be used in the translation. But the production of sentences in the foreign language was not as simple as all that. Grammar proved to be especially difficult because the grammatical structures of the different languages do not conform with one another exactly, and so another instrument was needed besides the lists of vocabulary: the so-called grammatical rules and their exceptions. We are referring to what is now often called "school grammar". This was intended to help pupils to learn to make certain corrections when attempting to construct the foreign language via translation. These grammatical rules were also learned and crammed into the memory by means of written exercises.

This traditional method of foreign language teaching was countered by a movement which had already formed at the beginning of the century and introduced the second phase, but only later did it manage to gain ground. It criticized the old method for giving priority to literary language and aimed at shifting priority to verbal language usage. Attempts were made to teach the foreign language along the same lines as a child learns its mother tongue, i. e. by means of the so-called direct method. The language, it was thought, should be learned while actually being used; teaching should take the form of a dialogue. Attempts with these direct methods, however, soon showed that those grammatical structures were particularly difficult to learn which deviated from the mother tongue. For this reason, special exercises were introduced anew. It was also decided not to take mechanically learned grammatical rules, i. e. the old school grammar, as a basis, but to search for specific linguistic *activities* for learning grammar. It was thought, therefore, that the pupil should be active and learn to master difficult structures by active practice.

It was precisely during this period – about the second quarter of the century – that behaviourism had come to prevail in psychology, and (initially at least) was propagating a very simple theory of learning: learning was viewed merely as habit formation. Applied to the learning of foreign languages, the result in simplified terms (other factors naturally also played a part) was the so-called pattern drill, or pattern practice, the impressing of sentence patterns on the memory by means of endless repetition. It was also during this period that the language laboratory was invented, which was just the instrument needed to implement this pattern drill. The pupil, sat in a cubicle, was forced to repeat the same patterns time and time again. The learning of languages deteriorated into a sort of parrot learning, which did not remain without consequences. It was soon recognized that the results of learning by the simple cramming method did not function properly in a situation where the language was really needed. Exactly the same defects were therefore encountered which had caused the failure of the grammar-translation method. The inefficacy of the results of grammatical exercise when put to the test in real speaking situations was demonstrated anew. Previously, it had been the grammatical rules and their exceptions which slipped the pupil's mind when actually engaged in speaking, now it was the results of the pattern drill which remained "walled in" in the cubicle of the language laboratory. Scarcely any transfer into real language and speaking situations resulted.

What attempts were made to solve these problems? First of all, various experiments were tried with the drill method. This resulted, for example, in the so-called situative exercises, or combined procedures in which drills were practised and the subject matter was simultaneously made clear, etc. Basically, a combined method was constructed in which the drill element was maintained but combined with quite a number of other methods starting from quite different presuppositions. But this eclecticism also failed to achieve convincing results.

I should now like to discuss the most recent developments. Today, there are various research workers in the field of foreign language teaching who are of the opinion – an opinion which I also share – that no more methods should be used which are based on the most diverse conceptions of learning, but that all of these actually antiquated methods should be discarded and a new start made. We can now profit from a reorientation of psychological research, which has proceeded at an amazing pace over the last decade. Psychology now shows hardly any interest in rigid habits, but devotes its attention to quite different things such as control systems, information processing, selective attention, things which we could generally describe as cognitive activities. I believe that a much more appropriate method of foreign language teaching could be developed on this basis, and this is not mere conjecture on my part: many different approaches are already being made, about which little appears to be known in the Federal Republic of Germany at present. Most of these new methods have been developed in the Soviet Union, and much is now being done in Holland and Belgium, because these two countries are far more familiar with the results of Soviet didactical research than the Federal Republic of Germany.

I should now like to explain several principles of this new cognitively oriented methodology of teaching and learning foreign languages.

The basic principle proceeds from a line of thought which already formed the focal point of foreign language teaching during the second phase of its development, namely that in normal school instruction priority should be given to speaking and understanding, that the object was not to primarily teach literary language but verbal language. It was also recognized during this phase that the two skills of speaking and understanding by listening should be developed in the context of real linguistic situations. The assumption made by the grammar-translation method that the command of a language could be gained via lists of vocabulary and the systematic learning of rules was fundamentally false. Moreover, I should like to mention that *Chomsky's* generative grammar has produced nothing to challenge this insight. Irrespective of how we rate the scientific-linguistic value of Chomsky's generative grammar, they cannot be used fruitfully for the learning of foreign languages.

In my view, the most important principle of cognitive-oriented foreign language teaching is that in the concrete linguistic situation listening should always precede speaking. Actually, this should be quite obvious, but fundamental errors are still often made in this respect. Listening takes precedence: this also means that the pupil should not be called on to say things for which he cannot yet find a proper basis in those verbal expressions he has heard, for the function of listening is that it furnishes the person learning with models, models which he can rely on. This applies not only in the beginning but also in the quite advanced stages of learning. Such models acquired by listening (once termed a flair for language, but actually a collection of cognitive models) later help in actualizing the foreign speech form from memory and in taking decisions when in doubt. If the pupil is called upon to speak too early, then precisely because he lacks these models he will make numerous mistakes which will tend to fix themselves in his memory. The psychology of learning has established that once mistakes have been made, a noticeable tendency arises for them to be repeated, even when corrected by the teacher or the person conducting the learning experiments.

The second principle can be derived from the first, for learning by observation of a model only becomes effective when the person learning knows how to analyze the functioning of the model to be observed. For our purposes, we can conclude from this that the person learning should not only listen to language, he should also be capable of segmenting the language heard, the spoken language. By segmenting, we mean that he knows how to distinguish between sentences, that he hears where a sentence begins and where it ends, that he can also distinguish parts of a sentence within that sentence, and finally, that he can distinguish words and that he recognizes the limits of words. But this is what becomes especially difficult when a method is employed which is derived from the second phase, namely the method of the auditory preparatory course, the oral approach. Many of you probably know, for a long time people were of the opinion that foreign language teaching should always begin with a phase in which no written work was involved at all, only listening and speaking. But this method has one great disadvantage: if only oral information is conveyed to the pupil, he will find it very difficult at the beginning to analyze the stream of speech sounds. He will have no idea where to begin. This danger is greater in the case of radio programmes for schools than in the normal class situation or televised educational programmes. Radio programmes are also unable to convey the mimic expression of the speaker, the entire play of features is missing, as are the gestures of the teacher, and there is no visually perceived situation. These are the so-called context aids, which can help the pupil to segment, to analyze the speech heard, which help him to develop precise, well-organized models.

The conclusion to be drawn from this is that written language should be introduced earlier, in fact very early in the learning process. I already developed a means of doing this some time ago: I proposed a combined reading/listening procedure, which we have also tested in Utrecht. Of course, this procedure does not have to be applied in every case. A combined reading/listening procedure is one in which one hears the language and sees the corresponding words at the same time. It is to be recommended in cases where essentially new words, essentially new structures, are introducted. It should also be made use of again during later phases of the language instruction, for instance when difficult texts are introduced. The question arises why the written language was actually discarded in the second phase. On the one hand, it is probably an exaggerated reaction to teaching based on the old grammar-translation method, which places the main emphasis on the written language; since the object was now to teach verbal language, the written language was discarded entirely. On the other hand, there is another argument for postponing introduction of written language, one connected with learning the pronunciation. It was feared that the pupil could acquire false pronunciation from the written language because at the beginning he could of course pronounce the words which he sees printed just as he would in his mother tongue. For example, as a German or a Dutchman, the pupil might be inclined to say "*k*nob" instead of "nob", because he sees the "k" which is pronounced in both German and Dutch. This is in fact a danger, but one which can be lessened if written language is not introduced all too early.

I would advocate, therefore, that a very early start is made with reading, whereas writing is postponed until later, precisely because writing demands a much more analytical occupation with the written word; it is necessary to analyze virtually letter by letter, and the pronunciation habits of the mother tongue inevitably intrude. When the written language is used in the reading/listening method, it is only important at the start that the pupil sees the beginning and end of a sentence and that he recognizes the word limits, for the latter are particularly important for understanding spoken language. This becomes very obvious in learning to understand French, in which many words are tonally connected in speech and therefore especially difficult for the beginner to hear where they begin and where they end. This necessarily impairs recognition of the words, which in turn makes it difficult to understand them. And without understanding no models can be acquired to enable the pupil to speak the language on his own later.

The same can be observed in an entirely different context. I once read a nicely written article on mistakes made by children in singing lessons where religious songs and old folk tunes are sung. It often happens that just by hearing children obtain a completely false idea of what is sung. I recall an example of an English hymn in which the line "the cross I bear" occurred; quite by chance, it was discovered that many of the children thought they were singing about "the cross-eyed bear", which indeed sounds very similar to "the cross I bear". There are many more examples, for instance "I scream" and "ice-scream". All these mistakes are made because the real word limits are not recognized. This is precisely where the written language can help. It is not necessary to break up a word itself, global perception of the written word as a whole is enough to lessen the danger of interference in the pronunciation.

The third principle I should like to refer to concerns grammar. I have already mentioned that it has always proved difficult in the first and second phase to develop an effective teaching method for grammatical structures, whether it be the old system of grammatical rules or pattern drill. In the meantime, empirical investigations have shown that some grammatical structures are learned very well by pupils as long as they are not dealt with on their own in special instructional units; they are simply learned via the acquisition of models, by hearing the language. But teaching experience also shows in learning a foreign language there are normally a number of grammatical difficulties which cannot be mastered in this way, not even after years of work. Empirical investigations carried out in Holland have identified certain structures in French and English which are especially difficult for people with Dutch as their mother tongue. A special method must be developed for such difficult structures, otherwise the pupils will still be making mistakes years later, or – and this is perhaps even less desirable – they will avoid these structures as far as they can. New methods for solving these problems have in fact been developed in the Soviet Union. The essential feature of these methods is that no one-sided emphasis is placed on knowledge of a language as in school grammar, or on speaking a language as in pattern drill, but that the knowledge of the structure is united with the use of the structure in an integrated form. I have written a number of publications in English dealing with these Soviet discoveries. Characteristic of this new cognitive method of teaching grammar is the use of visual schemes: squares, triangles, rectangles, arrows, question marks, etc., represent certain grammatical structures in schematic form; via systematic use of these schemes – the solution of various problems in which these schemes are applied – it is possible to achieve a uniform level of understanding and practical command of a language. The method also has accompanying instructions on how the schemes should be incorporated in the instruction; moreover, it is also explained how the pupils can later dispense with them to render the course of learning automatic. It is quite clear, by the way, that school radio programmes are at a disadvantage in this respect, unless visual aids are used, which is quite conceivable.

The fourth principle concerns the learning of the proper pronunciation. But we are not faced here with the introduction of a new methodological principle (pronunciation is learned by hearing, thus reference can be made to the first principle), but with a modification of the importance of pronunciation training. Didacticians have already warned against overemphasizing this aspect of foreign language teaching by the founder of Soviet foreign language teaching, *Belaev:* "Don't paint a house before construction work has finished". Above all, it is important not to set over-ambitious goals, but to take pronunciation training only as far as is absolutely necessary for oral communication. Today, we know that incorrect pronunciation is disadvantageous when a) a false emphasis is placed on syllables, b) the intonation of the sentence becomes distorted. Less or in no way disturbing, however, is the pronunciation of individual phonemes with a foreign accent. In many situations, this can even be useful: the person speaking is recognized as a foreigner, and is spoken to and treated accordingly.

Reading skill and the two verbal skills have in common the fact that they are learned by oneself by means of practice. Reading skill, however, consists of several components which demand special learning activities. A wide vocabulary is particularly important for reading. The traditional forms of vocabulary assimilation have shown themselves to be not particularly effective in this connection. Accordingly, our fifth principle says that words must also be placed in a proper linguistic context and where possible should also be learned in proper context. The isolated learning of vocabulary burdens the pupil with unpleasant and not particularly fruitful learning tasks. Instead of this, priority should be given to a large amount of reading. Moreover, the ensuing accumulation of vocabulary can be increased further by the pupil doing special exercises, such as the inference of the meaning of unknown words from the language context, or the recognition of word reference models in the foreign language (act – active – activity – inactive – actuate, and similar relations which are valid for a whole series of word stems).

The final principle concerns learning motivation. Actually, it is not a uniform principle but one involving three factors which are necessary to achieve an optimum learning motivation. Learning motivation is, namely, a decisive precondition for learning. How can a pupil's motivation be maintained? The learning processes necessary for learning a foreign language are very long, even when the best methods are used and where there is an optimum teaching situation. It inevitably takes many years to gain relatively good command of a foreign language. During this long period, it is unavoidable that the pupil's motivation will fluctuate if no special measures are taken to stabilize it. As already mentioned, there are three factors to be considered in this connection. Firstly, it has been shown that learning motivation – and this applies quite generally and not only to foreign language teaching – is less problematical the more effective the didactic conception of the course. It is therefore worth taking twice as much care and effort in developing courses in order to favourably influence learning motivation.

Secondly, at regular intervals the pupil himself should be able to recognize that he is making progress. Particularly the well motivated pupils are orientated to their future achievements and generally underrate themselves. They experience very sensitively the discrepancy between their actual achievements and the standard of achievement they are trying to reach. If, however, pupils are confronted with earlier achievements, for instance, with tape recordings or exercises, they can see for themselves that they have in fact made progress. This has a very favourable effect on motivation. Thirdly, it is very important to set interesting intermediate targets. Radio in particular has many possibilities in this respect; for the hearing and understanding of texts, such as talks, information, and reports in a foreign language concerning things really interesting to the pupil can have a very positive influence on motivation.

On taking stock of the current situation, we can see that as far as foreign language teaching is concerned school radio has very concrete possibilities, for radio is in a position to provide naturally spoken language on carefully graded levels of difficulty and dealing with topical subjects of interest to the pupil. This is advantageous for both the accumulation of heard language models and the motivation of learning. On the other hand, the principles of modern language teaching research referred to above require the use of visual aids (schemes, texts, etc.). If these aids are used in connection with the possibility of recording programmes on tape they can make a substantial contribution towards increasing the effectivity of school radio in this sector. It is quite conceivable that a combined procedure of this type can achieve more than school television, which is far more costly.

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Sascha W. Felix

Foreign language teaching and school radio: Regularities of language learning

A growing amount of uneasiness and perplexity can be observed today in foreign language teaching. One of the main reasons for this is that teachers feel that scientific research has let them down particularly with respect to practical instruction. They are furnished with only a very modest range of decision-making aids. This perplexity was also noticeable at the European School Radio Conference organized by the Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen (IZI) in Munich. Representatives of the Finnish, Swiss, British and Swedish broadcasting corporations presented excerpts from foreign language programmes broadcast on radio. Particularly impressive was the Finnish contribution, which used broadcast dialogue to give an attractive and entertaining demonstration of the differences between American and British English, a subject very rarely and mostly inadequately dealt with in the usual teaching of English.

In his paper "New research findings in foreign language teaching", Prof. *Dr. C. F. van Parreren* from the University of Utrecht gave a historical survey of the development of methods and models used in foreign language teaching, which concluded with a clear vote in favour of the parallel introduction of written and spoken language in the instruction for beginners, who are especially dependent on the help of the written word for an accurate recognition of word limits. This view will, of course, not be shared unreservedly by all experts, particularly because it conflicts in many cases with the actual experience of foreign language teachers. Moreover, it is hardly likely that the crucial problem of foreign language instruction is the recognition of word limits.

Such disagreements are symptomatic of the situation currently prevailing in foreign language teaching. None of the teaching methods propagated in the past have even approximately fulfilled what was promised by their advocates. Accordingly, foreign language teachers, text book authors and radio programme editors continue to rely on their practical experience and intuition when planning their lessons.

Unquestionably, the basic problem is that we still hardly know how a person learns a foreign language under instructional conditions. A process which proceeds according to laws we do not know cannot be effectively controlled. For this reason, recent research has taken totally different directions. Foreign language teaching is no longer viewed as an isolated, single phenomenon but as one within the entire complex of language acquisition. The question asked is how does a child learn his mother tongue? How does a foreigner learn German, for instance, via nothing other than daily contact with German surroundings? How does a pupil acquire a foreign language via formal instruction? What differences arise between these forms of learning languages and what things do they share in common? These investigations focus their attention on the person learning and on his linguistic behaviour. It is not a question of how many mistakes the pupil makes in the course of a lesson, nor of the external factors influencing the learning process. The object is to get a grip of *how* the learning process proceeds. How does the person learning assimilate the linguistic expressions which he hears in his immediate surroundings? Is this form of assimilation subject to laws?

The methodical procedure is as follows: German children, foreigners and foreign language pupils are observed daily over a longish period of time and notes are made of the expressions they use, their meaning and the situation context. On being compared, these notes revealed a large number of surprising parallels, in spite of the fact that the learning situations differed considerably from one another. Every form of learning a language would thus appear to proceed in line with specific laws which are not dependent on external factors but are somehow inherent in the human being. The decisive finding is that the human being does not learn linguistic structures by absorbing what he hears as a whole, storing it and recalling it when needed; he rather assimilates these structures by selecting from them, arranging and modifying them, by testing, rejecting and trying out new constructions of his own making – all according to the same principles and laws. This can be recognized, for instance, from the mistakes made by German children. During an early phase in learning their mother tongue they form negative sentences by putting the word "no" at the beginning.

"No Daddy smack" or "No milk drink" are the sort of examples encountered in German. Later in the course of the child's development the word "no" suddenly appears in the middle of the sentence, the child saying "Daddy no smack", or "Milk no drink". Only after the child has used these structures for some time does it finally pick up and use the word "not". The important thing to be observed here is that the child cannot have learned a sentence like "Daddy no smack" from his parents, since adults don't speak like that. Accordingly, the child evidently assimilates what he hears from his sorroundings in such a way that seemingly wrong sentences are produced. What is more, this is by no means an isolated example, as far as we know structures of this form are used by all German children, all of whom are at the same stage of development. Thus, such "false" sentences are not mere chance products but would seem to be the result of specific principles and inherent laws. One of these principles is that children do not simply reproduce what they hear but pick up individual elements, such as words and word orders, in a quite systematic and predictable way, and form sentences from them which adults would not use.

It is astonishing to observe that inherent mistakes of this kind are not only restricted to German but also occur in other languages, and in the same manner and the same stage of development. During an early phase, the young English child will be heard saying something like "no the sun shine", and the French child "non Jean menti". A little later, "no" or "non" will appear in the middle of the sentence: "the sun no shine" or "Jean non menti". Only later do the words "not" and "pas" appear in the respective child's vocabulary. The regularity according to which these false structures arise indicates that they are not mistakes in the customary sense of the word. Such "mistakes" represent a necessary step forward in linguistic development; they are needed by the child to gradually learn the correct sentence structures.

In this sense, children undergo a development process in that they pass through predictable stages of learning: i. e. correct language develops from a series of incorrect expressions. The work being carried out by the Heidelberg University project "Pidgin-Deutsch" and a Wuppertal research team headed by Prof. *J. Meisel* demonstrates that the principle of the systematic series of learning stages, in which faulty structures exercise a specific function, applies not only to the acquisition of the mother tongue but also in the case of foreign workers and their children in Germany who learn German as a second language. Here too, it was frequently possible to encounter the same structures found in the mother tongue, and at the same point in time.

Starting from these findings, a research team headed by Prof. *Dr. H. Wode* of the English Department of the University of Kiel took the next step in comparing non-school acquisition of a language with formal foreign language instruction. Surprisingly, the inaccurate expressions of the persons observed possessed precisely those characteristics which in learning the mother tongue are typical of the learning stages specific to development and therefore necessary. Accordingly, the laws regulating the non-school aquisition of language would appear, at least partly, to also apply in the case of formal foreign language instruction.

If, however, the learning of a language proceeds according to general laws, and if besides factors such as linguistic talent, teaching method or teacher attitudes, these laws also determine the learning of foreign languages in school, then – contrary to prevailing opinion – the pupil's learning process can only be controlled to a very limited degree from outside. Moreover, controls which run contrary to the natural laws of language acquisition appear to be condemned to failure. Apparently, not everything presented by the teacher is thus learnable; the pupil seems to assimilate the foreign language material in part according to autonomous principles which are independent of the respective teaching method and the intensity of the linguistic exercises. Successful foreign language instruction will therefore also depend on whether the natural laws governing the human capacity for learning languages are taken into consideration and made use of.

The practitioner will now be largely interested to see how these findings can be put to use in daily work. But the present level of research in this context demands that we proceed very cautiously. Nevertheless, several aspects are already beginning to take shape.

One of the basic principles of language acquisition appears to be that selection; not the selection of teaching material on the part of the teacher, but selection from what is heard by the pupil. Selection, however, presupposes that a sufficiently large quantity of material is made available. When only little is offered the pupil hardly has a chance of making a selection. In normal school instruction, the range of what is offered tends to be kept small; this is frequently done deliberately by the teacher so that the pupil produces as few inaccurate expressions as possible. The fear of making mistakes continues to dominate foreign language instruction – in both teacher and pupil. But if certain types of errors are necessary for development, then less emphasis should be placed on avoiding errors and instead an effort made to ensure that the foreign language is diverse and extensive enough to enable the pupil to select and pass through the various learning stages as quickly as possible.

There are of course limits to what the school can do in expanding the scope of foreign language instruction. Even when the teacher employs audiovisual equipment, such as language laboratories, he has only relatively little time available for presenting genuine foreign language material. It is precisely here in the supply situation that new possibilities and prospects are open to the media, to radio and television alike. Both can offer an extensive and diverse range of authentic foreign language material, thus expanding the scope of supply and exerting a decisive influence on the course of the learning process.

These opportunities will be wasted, however, if the media attempt to imitate the usual form of foreign language instruction, even when it is subjected to appropriate optical and acoustic treatment. Constant repetition of grammatical rules, for example by means of written fade-ins, ultimately reduces the volume of the foreign language component since the pupils largely register and assimilate structures according to different principles from those laid down by grammatical explanations.

Moreover, television and radio can present the foreign language in authentic situation contexts, whereas school instruction can only simulate situations (e. g. asking one's way, shopping in town, etc.) – a procedure which the pupils soon see through and recognize as being unnatural. But here too, opportunities are being wasted when, for instance, – in an attempt to be humourous – the situation contexts shown in television language courses are remote from the actual communication requirements of everyday life, and are sometimes even quite ridiculous.

Accordingly, foreign language programmes broadcast by the media should be primarily understood as complementing school instruction and not as an imitation. This also applies in principle in the case of languages which are not taught at our schools. Here too, the media should make use of their own specific possibilities, especially in expanding the range of what can be offered, and not reproduce traditional forms of school instruction.

The problem which thus arises for the programme editor is for him to conceive broadcasts in such a way that the person learning a foreign language is induced to join in the communication process. A person does not learn a language merely by being subject to a constant bombardment of information but via participation in given situations. Participation is not to be understood as repetition exercises or structure exercises in the sense of audio-lingual pattern drills. It will rather be a question of searching for new ways of promoting communication in the interest of the person learning the language, not by getting him to reproduce given sentence structures as accurately as possible, but by setting him the task of mastering a specific situation linguistically, i. e. of explaining his intentions.

To discover ways of this kind is of course a complex undertaking which will have to be projected on a long-term basis if it is to be successful. But precisely in this field of foreign language learning there is a wide scope of possibilities for radio and television hitherto unexploited.

Judit Dimény

Music education in school radio: The Hungarian model

The special function of school radio, considered within the radio broadcasting programme as a whole, is the same in every country, namely to present culture in its own specific way: The teaching and learning process takes place in a quite different manner from that of the other programmes, to the extent that school radio not only offers "finished" cultural products, but also enables the listener to actively participate in the process of acquiring cultural knowledge.

From the standpoint of the school, school radio broadcasting performs its function well when the content and method of school lessons is enriched in a manner which is characteristic of radio and cannot be achieved in this way by other teaching and further education media, such as school books, records, films, or television. I feel that these two aspects – content and method – apply to school radio broadcasting in all its forms, and accordingly also to music instruction.

In all European broadcasting stations we can observe a tendency to promote the development of school radio. Despite the different demands made on school radio broadcasting in individual countries it is still evident that each country is intent on making advances, whatever way it chooses. Today, music is taught over the radio differently than it was ten years ago, and in a further five or ten years we shall be in a position to judge more clearly whether we have achieved those objectives which each of us has presumably set ahead of us today.

Two main factors are determining the development of music programmes in school radio broadcasting: formal changes in radio broadcasting and the curricular development of teaching, especially, as far as we are concerned, of music instruction.

The development of radio broadcasting is orientated to the new demands of the listener, conforming with them and shaping them at one and the same time. If school radio broadcasting would not keep pace with this development, it would be open to the charge that it is only preserving traditional tastes and habits, like an old-fashioned school. Its programmes would inevitably lose their effectivity. Moreover, it would forfeit its role of forming the tastes and habits of future listeners, which is by no means a secondary task even if it is often underrated as such.

In referring to the formal changes in radio broadcasting I mean the general shortening of the length and an accompanying increase in the pace of programmes. At the same time, the listener expects the radio broadcasts to be more varied as to content. Listeners prefer a natural, personal language, a clear, generally understandable mode of expression, and the expression of personal opinions. All of these demands are made also on instructional programmes. In the case of broadcasting stations which have no separate channel for school radio programmes it is also especially important that the programmes are entertaining.

Turning now to the trends manifested in the second factor determining our work, I should like to repeat what I said at the beginning: School radio broadcasting not only presents finished cultural products, it also enables the listener to actively participate in the process of acquiring culture. This is a principle which the people concerned with school radio broadcasting have adopted from practical educational methods in general. In this context, I should like to quote *Dr. John Paynter*, Professor of Music at the University of York: "If any one aspect of education today is characteristic of the whole, it is probably the change of emphasis from children being instructed to children being placed in a situation where they can learn for themselves."

Hungarian School Radio began broadcasting in 1963. Today it is considered essential that the child is not simply a passive recipient but an active participant, whether he is learning at school or from school radio programmes.

The Hungarian Broadcasting Service broadcasts music programmes for children and young people not only within the framework of its school radio programme. It also has a youth department with a music section which produces a wide selection of music programmes for different age groups:

music composed for children;
songs from different countries;
quiz programmes with participation of the public;
competition for collectors and singers of folk songs;
the occasional children's opera written specially for radio by well-known composers;
performances by choirs from primary and secondary schools;
magazine programmes for young people;
interviews of promising young musicians;
series devoted to early musical instruments, etc.

This wide choice of programmes complements the music broadcasts of the school radio programme extremely well.

One of the most important tasks of the music department of the Hungarian School Radio is to help school teachers with respect to their method of teaching music in schools, which has a firm tradition in Hungary. As you may know, music teaching in Hungary is based on the teaching principles of *Kodály*, which can be summarized as follows:

The object of music education is to provide every child with a uniform basic knowledge of music in both primary school (6–14 years) and in secondary school (up to 18 years). The basis of music education is singing. It relies on music of outstanding quality and uses the relative sol-fa as didactic method. Great emphasis is placed on the ability to read and write music.

In accordance with the Hungarian method of teaching in general, "Music and singing instruction" (the official designation) is based on centrally issued, uniform curricula. At every school, the pupils use the same text books and exercise books and the teachers the same reference material.

This is the uniform basis of our music instruction. But since there can be considerable differences in the musical capabilities and training of the teachers, especially among primary school teachers, variations in the levels of pupils' knowledge from school to school can hardly be avoided. For that reason, we thought it necessary for school radio broadcasting to give intensive help in music education provided in primary school.

We first started some years ago with a weekly broadcast of a series of programmes for the first class of primary school, comprising a total of 30 programmes in the course of the school year. It was repeated the following year and also recorded on tape for distribution to the schools. At the same time, the department took the next step, producing a series for the second school year which was also repeated and taped for distribution; this was followed by a series for the third-year classes. Hence, there are 30 programmes available for each of the classes mentioned, which are repeated the next year.

The material used in the broadcast music lessons is based on the national curricula for schools issued by the Ministry of Education. At the beginning of the school year, we draw up a schedule for the 30 programmes of the series and distribute it to the schools so that they can fit it into their teaching plan for the year. On completion of a whole series we also compile a detailed lesson plan. One broadcast lasts for 15 minutes and contains in condensed form the essential elements of one music lesson at school: the learning of songs, the practice of reading and writing music, the systematic preparation of unfamiliar musical elements and their acquisition, together with music games and listening to music. The school music lesson lasts for 45 minutes; the teacher can therefore work through what the class has heard at whatever pace he considers necessary and according to the needs of the class.

The programmes are produced in the studio with children under the direction of Prof. *Edit Lantos*. The aim of the programmes is to also enable children in the schools to actively participate with the children in the studio in practising, singing and playing and answering as many questions as possible. The signal for an answer is given by the sound of a triangle, which is often heard during the programme and is followed by a pause lasting several seconds to allow the children in the schools to give their answer. It is easier still if the teacher uses a tape recorder because he can stop it after each question. (Examples from music lessons were given at this point).

We are faced with an interesting antithesis: the teaching of reading and writing of music by radio. Accordingly, the acoustic possibilities of radio must be used to link up the acoustic and visual elements of music. The acoustic elements – the pitch of the note and the rhythm – are registered and differentiated by the ear.

If, however, we also want to designate the pitch of the note and the rhythm we are forced to complement radio with visual aids.

Since the children acquire knowledge through their active participation in this series, the radio teacher can take over part of the instruction otherwise given in school lessons. One of the disadvantages of this form of programme is that if it is heard directly from the radio it makes the listeners into a rather uniform audience, leaving insufficient time for individual answers. A further serious objection is that due to the standardized curricular material we are obliged to ask questions to which there is only one correct answer. We cannot abandon this type of question if we want to achieve educational goals, but they do not promote independent thinking and the formation of individual opinions, nor do they ensure that each child participates in the course of instruction in line with his own individual learning pace.

If we want to achieve the latter, i. e. to give children the possibility of learning at a pace corresponding to their personal capabilities so that they can discover what they are able to understand, really discovering it for themselves, then we must make programmes which above all activate the listener after rather than during the broadcast. We have been experimenting for years with such a series titled "Sound Game".

This series also involves a group of children and a music teacher in the studio. They chat to one another, listen to music, play and improvise. There are, however, no fixed topics and no teaching schedule issued by the Ministry. We also have completely free hand as to method and we respond to the demands of each topic as it arises.

Some programmes deal with the special ranges of sounds; e. g. "We were birds", "Animal voices", "Ringing the bells", "In what tone?" On other occasions we had several successive programmes dealing with polyphony: "In different ways", "Discussion of voices", "Let's imitate that", "With accompaniment", "Among instrumental voices". Other parts of the series draw attention to the forms and structures in music or to the musical performance and mode of expression: "Don't cry, laugh!", "Darkness", "Light", "From dark to light".

The series is thus not homogeneous as far as its subject matter is concerned. But one thing is common to all the programmes: they are based on the conviction that what is taught must be built upon what the child already knows, and not on what it does not yet know; in our case, this means not only what the child knows of music or, in the broader sense, of the acoustic world, but what it knows of its surroundings which are infinitely varied and colourful yet still form an integral whole. It is thus a question of basing every form of teaching on the knowledge and experience which the child already possesses. This knowledge and experience is as complex as the reality of the child's surroundings.

The "Sound Game" series has been produced for children of eight to ten years of age and the children taking part in the studio are of the same age. What can we expect children of this age to know apart from what has been learnt at school?

A child is able to differentiate sounds at a very early age. He recognizes many people by their voice when he hears them speak, and some when he hears them singing. A child can also change his own voice, the tone of the sounds when speaking or singing. This in itself can form a basis for many interesting games and revealing observations (Excerpts were given at this point from the programme "In what tone?", in which the children alter their own voice while speaking or singing).

The handling of the voice, altering and forming it according to certain rules, is an extremely creative musical game. Activities of this kind also make children extremely receptive for more serious subjects. In the course of creative games like this they grasp fundamental relationships and fundamental truths, which they can gain much better command of than if we had tried to drum it into them in the form of mere information.

As a continuation of the game in the same programme, the children were asked to listen successively to two recordings of a folk song, the first sung by a young trained singer, the second by an old untrained peasant woman. The children then compared and discussed their own impressions of the two versions. (Excerpts from the programme "In what tone?")

Afterwards we listened to the voices of singers from different countries – to the different tones and timbres. The children immediately began to imitate them. We then tried to find an answer to the question why people from different parts of the world sing in different timbres. One important reason given was that they speak different languages. The programme ended with an excerpt from a modern European choral work which also differed very noticeably from the European choral works with a traditional timbre used for centuries.

What else is a child capable of doing? He can carry on a dialogue, i. e. he can ask questions and give answers. Answers can be given in the form of words, rhythm, or improvised melodies. In this way we can prepare the way for an understanding of musical dialogue, of the dialogue between singers, between orchestra and solo instruments, between solo voices and choir, the double choir; or we can also lead up to an understanding of the form of the simple period.

Beyond that, a child is able to imitate, i. e. to repeat word by word, or to reproduce what he has heard: text, rhythm, melody, even movements that he has seen. This game leads to an understanding of the canon and the fugue. A child hears the sounds of his surroundings, the sounds of the birds and other animals. He can imitate them and recognize them when they are reproduced in music. A child also registers the sounds made by objects used every day, and compares them with one another and with the sounds of nature. He can also use these objects as musical instruments – if rules are agreed upon beforehand.

A child can speak, and observe the melody and rhythm of speech. He can also discover that our everyday manner of speaking often attains the melodious sound of music – and that music sometimes imitates the dry reciting style of speech. A child's understanding of music can sometimes be made easier by earlier experiences and association of ideas, sometimes we can also help by using musical improvisation.

The aim of the programme "Jumping and winding" is to compare two different forms of melody. The musical examples played were excerpts from the Mallarmé Improvisations by Pierre Boulez and Bach's Kreuzstab Cantata. To prepare the children they were asked at the beginning of the programme to construct sentences from one-syllable words and to extend them with one-syllable words. They then had to improvise melodies for these sentences in two different ways: firstly by making the syllables jump about from pitch to pitch, and then by improvising a flexible melismatic melody. (Excerpts from the programme "Jumping and winding".)

The gradual transition from dark to light can also be played using simple rules: by the transition from deep vowels to increasingly lighter ones, or using improvised instruments. (Excerpts from the programme "From dark to light".)

While this type of programme demands considerable attention from the listeners, the listeners' real activity begins only after the programme has been heard; and it does not consist in simply thinking over what has been heard, they are induced to think further. Nor are the music games designed for mere imitation, they also encourage further thinking if only because mostly a considerable number of correct answers can be given to the questions posed.

In several of our sound games we created quite modern musical effects, which could be taken for excerpts from contemporary compositions although the games are quite simple. Children have enjoyed these unusual musical effects immensely. This is no mere coincidence, since it is precisely the young listeners who are as yet unbiased, who prove to be interested in the new forms of expression in contemporary music. Accordingly, I think that we ought to endeavour to promote this encounter between young people and new music by means of our programmes.

Hungarian School Radio is planning a series on contemporary music for young persons to be broadcast in the next few years. The fact that we have also taken this theme seriously hitherto is demonstrated by the large number of compositions by modern composers broadcast in "Sound Game". Besides works by Bach, Handel, Schütz, Monteverdi, Mozart, Beethoven, Haydn, Schubert, together with pieces of Gregorian music, African and Indian music, works by Bartók, Kodály, Schönberg, Strawinsky, Lubos Fiser, Pierre Boulez, György Ligeti and the Hungarian composers György Kurtág, Attila Bozay, Zsolt Durkó and Sándor Balassa were also used in the series.

One of the characteristics of contemporary music is that it has considerably extended the range of musical sounds. *Murray Schafer* quotes *John Cage:* "Music is what resounds; the sounds which surround us, no matter if we sit in a concert hall or anywhere else." And Murray Schafer himself also maintains: "Everything in the world that is moving also moves the air. And when something is moving at a higher frequency than 16 oscillations per second, we perceive this movement as a sound. So the world is full of sounds."

If we are to help our children find their place in this world full of sounds and to learn to control and master them, then we must not only teach them music but also teach them to listen. This new subject could be called acoustical training or education of the ear. Its aims would be the understanding, the aesthetic command and the reorganization of the complex world of sounds that surrounds us. Should the long-term development of music education really take this course, there is perhaps no media better suited than radio, and school radio in particular, for testing and realizing this new form of acoustical education.

The plenary session, "Music education in school radio", was chaired by Dietrich von Bausznern, composer and university lecturer, who finally summed up various aspects of that subject.

Dietrich von Bausznern

Music education in school radio: Selected programme examples and new possibilities

Music teaching at the elementary level

Many school radio programmes in all countries deal intensively with music teaching at the elementary level, in particular with the learning of musical notes, the recognition of different tones and the first principles of general music theory. This basic musical training, that can almost be assigned to preschool age, can be divided into three groups:

a) The Hungarian method (we need do no more than mention the name *'Kodály')*,

b) the "*Orff* Schulwerk", and

c) the method which aims at teaching basic musical ideas by means of folklore.

Training the ear

To put it simply: most systems of ear training start with nonmusical sounds and with avant-garde music – as we all know. Both of these fields – basic musical training and the training of the ear – are tackled consistently and imaginatively. We will hear this afternoon with what variety of invention each producer has produced examples of programmes for these fields.

Composed music

The composed music of the West is dealt with to a lesser degree in the programmes produced by school radio departments, compared with these two other fields, basic musical training and the training of the ear. In almost all the countries of which I have knowledge the imaginativeness that is present in e. g. the basic musical training is not to be found in this field. To put it in a different way, continuity in development work from elementary training through composed music to the training of the ear/avant-garde music is not often met with. Music teaching from the first class through to the final classes in schools is interrupted in the intermediate classes. Instead, the instruments of the orchestra are dealt with, different settings of the same text are compared, recordings of concerts, quizzes etc. form the subject matter – programmes which of course should not be absent from school radio music.

Here, however, I am concerned with the analysis of a work – of composed music; analysis in the broadest sense, not only in terms of music theory. For why should the basic principles, the learning of notes, ear training, be otherwise taught, if not for the *learnable* understanding of a composition.

Apart from these three fields that provide the contents of school radio music programmes,

1. basic principles of music
2. ear training
3. the analysis of composed music,

we should ask the question of who is intended to be the recipient of this kind of programme. Besides the state schools, the many music schools for children and adolescents form a further field for school radio: the music schools that can be found in large numbers in almost every European country. The present conference could give to and receive from school radio suggestions and ideas as to how these children and adolescents, who are actively performing music, can be systematically reached. In contrast to the state schools, here we have groups voluntarily engaged in music with great commitment, often with great sacrifice of time and money.

In addition to the school radio programmes as an aid, complement and stimulation for the subject 'music', pupils are confronted with a form of music-making – for the pupils also from outside – that has an unfavourable effect upon music as a school subject. Here I mean the trend in music known to us all that no longer has anything to do with art and culture, but that is more concerned with the industry and marketing of short-lived kinds of music and daily events. We often hear such quotations as: "... we must take into account the musical reality outside ..." from teachers and musicians, which, however, cannot mean much else than that industry and marketing in music are to be the "inner motor" for teaching.

We must take it for granted that concern with music means concern with art and culture. In the context of "music teaching in school radio", however, music is also a school subject. From these considerations – art and culture as well as school subject – arises for us an educational task. Radio, and school radio in radio, occupies a quite basic position in this educational task. Here *school* radio can consciously adopt a position against the marketing of music, that unfortunately can be observed even in some departments of the same broadcasting corporation, – as it were next door. Here school radio gains special importance.

One last idea: special thought should be given to the question of who is to receive the school radio programmes – in this case music programmes. Perhaps we will be provided with information on this subject tomorrow. In the meantime, here are some ideas:

1. Who receives music programmes?
2. To what extent are they received as a stimulus by the teacher?
3. By the pupil?
4. By the teacher who, like myself, is concerned with teacher-training?

We should deal with this problem, that of who receives school radio programmes, quite separately, as there is the danger of the school radio departments detaching themselves from those directly involved, namely, the pupils, teachers and teacher-trainers. After Ms. Dimény's lecture and the demonstration of selected programme examples, the chairman of the discussion opened the debate with three points:

1. The lack of continuity from basic musical training, through composed music, to avant-garde music/ear training.
2. The direct or indirect influence of industry and politics on music teaching in schools and thus on school radio also.
3. The question of who receives music programmes in school radio in close contact with the target groups.

Preliminary remarks on the choice of the four selected programme examples

The preparations for the music section of the "European School Radio Conference" started on the assumption that from the variety present in music only small segments could be brought up for discussion.

Ms. Dimény's lecture on the basic principles of "music education in school radio" was – from the point of view of Hungarian school radio – a consistent and detailed analysis of aspects that could certainly be of common interest to all school radio departments, even if in different form for each country. An advantage for the audience was that her theoretical considerations were followed by a section with musical examples.

The didactic and methodic treatment of melody, harmony and rhythm as the three basic elements in music motivated the selection of musical examples. An attempt was also made to find a representative European selection from the material offered by the various broadcasting organizations. Thus the examples for melody came from Hungary, for rhythm from the Federal German Republic (Bayerischer Rundfunk) and for harmony from Belgium. The fourth example from Norway was chosen as an experiment combining picture and sound for school radio. One basic consideration in making this choice was that each producer should discuss his own contribution and "defend" it himself. No prior agreement had taken place with the producers.

In his lecture, Professor *Dr. Hermann Regner* was primarily concerned with the experience he had gained in working for the Bayerischer Rundfunk school radio. By giving a short overview of music teaching in the schools of the Federal Republic of Germany, Regner described the situation with which school radio is faced, this being supplemented by examples from his work devoted to ear training, especially with children in the first classes. Short recordings from one to three minutes in length were intended to illustrate the teaching aims. By use of percussion instruments and nonmusical sounds, a distinction between different tone colours and different instruments, between loud and soft, high and deep, slow and quick, was to be made by the pupils. Using a performance of W. A. Mozart's rondo for four hands from the Sonata in C-Major (KV. 19d), ear training exercises were to be solved by omitting and replacing parts. This made clear how difficult such ear training exercises are for radio, as the reactions of the pupils cannot be clearly taken into account. A sentence of central importance in his lecture was: "I am of the opinion that school radio has obligations not only towards the school but also to radio. In many of our programmes, therefore, we offer not only 'school radio' but also 'radio school', training in 'media hearing'!"

The second part of his lecture introduced the "Orff Schulwerk". We heard a programme broadcast on the occasion of Orff's 80th birthday.

Four "basic ideas" also became clear:

1. The "Orff Schulwerk" as a stimulus in both elementary and primary fields, as well as in social and therapeutic pedagogics.
2. The basic pedagogic idea of the "Orff Schulwerk" as a music counterpoint to the dancing movement of the child.
3. The small child's own experience of the instrumental dimension through easily playable instruments.
4. Encouragement and stimulation for children to learn to produce, improvise and compose music, dance and speech.

The "Play of colours" – four audiovisual programmes of the Norwegian Radio – had been produced as an experiment in Norway. After the full audience had heard and watched them, doubts were raised about the desire and claim made by the authors that a community feeling could be created in the school classes through an experience of this kind. Besides, the creativity of the children, which in the Hungarian contribution in particular, and in part also in the German programme, had been the most important part of the examples, was suppressed. The subsequent employment of autonomous, composed music as a background for pictures previously prepared also seemed doubtful in spite of the fact that making combined use of picture and sound was welcomed in principle, in particular with regard to television.

The Belgian example, using composed music, illustrated the role of the conductor with all the difficulties of interpreting music without performing it himself, like the practising musician. Short excerpts and different interpretations of Beethoven's Fifth and Eighth Symphonies, compositions by Honegger, Rossini, Bartok, Lully were intended to demonstrate the difficulty and importance of a conductor in the performance of composed music and within the musical world in general. For reasons of time the complete contribution could not be presented, but the general trend of the programme became very clear even in the shortened form.

The plenary discussion

The discussion that followed the last programme example showed clearly that music teaching in school radio depends on the form of the programme, on the "packaging". The different age groups must be given an offer of different forms of programmes also in school radio, in accordance with the general principles of education.

The "frontal" form of teaching of school radio requires forms designed to arouse active, creative learning. In this context it was observed that the examples given were predominantly informative in character and did not display enough stimulation to creativity. Direct "active participation" should be stimulated for the 12 to 16-year-old age group, in accordance with their stage of development. A conference to be planned in the future should have new types of broadcasts developed for it.

The continuity in content of school radio musical education – it was agreed – is broken for 12 to 16-year-old pupils. The inventiveness shown in the imparting of basic musical knowledge in the lower classes in almost every programme is not to be found in the production of programmes for the intermediate classes.

Irrespective of the form of the programme, what is missing is any relation to the composed music of the past and of the present. Cooperation between composers and editors could help to close this gap. References to music previously composed specially for school radio (SWF) made clear that musical understanding can be taught by means of new, model compositions. This kind of composition can also make pupils understand composed music of the past, in particular those pupils who receive no or not enough qualified teaching in school.

The working group

A smaller working group was formed of music editors of school radio to follow up the ideas expressed in the plenary discussion. The matters of interest to the European participants could not be fully treated here, because – as a result of language difficulties – not all the music experts assembled. The exchange of ideas in this smaller group was very intensive and fruitful. The lack of continuity in music teaching in school radio, already mentioned in the plenary session, was once again expressly confirmed. It was doubted whether a way starting from the Orff or the Kodály methods to composed music could be found.

A broader basis should be found for the work of the school radio departments. The suggestion was made that psychologists and composers should be engaged as free-lance contributors. The psychological contributions on perception and attention here gave rise to the request for the findings of developmental psychology to be taken into account in the preparation of music broadcasts. Cooperation between the music departments and school radio departments should also be intensified. In the same way, the Pedagogic Centres that exist in some places should also be involved when new series of programmes are to be developed.

The European idea of the conference was warmly welcomed. The exchange of tapes – including tapes from countries speaking different languages – should be actively pursued so as to enable international series of programmes to be produced. Information on this subject was expected in the plenary session on the subject "Foreign language learning with school radio" on Thursday.

The situation regarding the numbers of listeners receiving programmes was seen as being more favourable than it had been in the plenary session. The personal initiative of editors from the smaller broadcasting organizations in particular, (RIAS/Radio Bremen) often went beyond the limits imposed by the "frontal" teaching of school radio. New programme contents were worked out through direct contact with the children in the schools and with the teachers, which also encouraged independent music-making.

The folklore of the world is another large field in which the music departments of school radio are engaged. For this simple reason the desire to exchange international information was clearly expressed.

Differing views were heard concerning pop-music. Some participants regarded it as possible to reach teaching objectives through pop-music – just as through serious music specially composed for school radio. This was denied by other participants, who were of the opinion that too much room was given to the form and content of pop-music.

The motivation to continue offering and to intensify music teaching in school radio was made clear by e. g. the fact that an EMNID survey on use of leisure showed that 70% of children were interested in music.

Closing remarks

The interest shown in the lectures and the way participants joined in the discussions in plenary session and in the working group showed that the subject "Music education in school radio", dealt with at the European School Radio Conference, was extremely well chosen. Differing views and desires based on experience gained in individual fields of work were expressed. The group of questions, formulated at the start, – the continuity of music education, external influences on schools and thus on school radio, and the numbers of pupils receiving programmes – also formed a constant theme in private conversations held outside the officially organized part of the conference. The following wishes were clearly expressed:

1. The continuation of such conferences at a national, and if possible, at an international level.
2. Better cooperation within the same radio corporation between the departments responsible for music.
3. Exchange of tapes at a national or international level.

Using the results gained at this conference, the Zentralstelle Fortbildung Programm (Centre for Further Education/Programme, jointly set up by ARD/ZDF) is organizing several seminars (1978/79) for editors of word and music departments (heads of project: Dr. Linz, von Bausznern). The seminars are concerned with programmes designed to interest young people in composed music.

Henri Dieuzeide

What is the future of school radio?
Closing address at the conference

I am delighted to hear that I have finally to make only summarizing comments. I was dismayed to read in the programme that I was expected to "evaluate" this meeting. It is technically very difficult to evaluate such a meeting with all its implications. It would imply quantification and correlation of objectives and results. It would take – as any researcher here in this room would tell us – several months to achieve. It is also a socially and professionally difficult exercise: The organizers may resent the kind of remarks you bring forward, contributors always think their contributions have been misrepresented, and participants always agree that the evaluator has not understood anything about what took really place at the meeting.

So, all I could do is to offer some personal assessment of what I have seen and heard here, and I would say that, thanks to all your contributions, it will be an easy task. You probably know the story of the gentleman who married a beautiful widow who had six children from a previous marriage. They went on their honeymoon and when he came back and was invited to comment, he said: "Well, it was absolutely wonderful, but somehow all the time I had the impression that much of my work had already been done."

Well, much of my work, thanks to you, has already been done here, and you will carry it on, I am sure, on your way home and later in your work, trying to assess by yourself what this meeting has brought for you. But I think it's a good thing to try and take stock of achievements and failures that have taken place here in the past three days.

My own international experience has taught me that this is the time for frustration, and naturally, we all feel more or less frustrated about this meeting. Some of us who have come a long way from home think that they could have contributed more to the meeting, that perhaps they have not done enough for the image of their own organization, or that their efforts have not been recognized enough. Others consider that there was too little time at the end for individual exchange; as one participant put it: "I am still hungry." Such frustration is inevitable, and I would say it is also profitable and we have to make use of it in our future work. If I were to do any quantitative assessment, I would say that this meeting, which was called a European School Radio Conference, has been a truly European one. I am told, there were ninety-two participants registered from eighteen different European countries, and also that non-German participants made up the majority.

We *did* talk about *school radio*. We had sixteen hours of plenary sessions, six lectures, eight presentations coming from eight different organizations, and about sixty extracts from different school radio recordings. We had group sessions and also spontaneous group meetings, which is an unquestionable indication of the real interest aroused by the meeting. A lot of preparatory work by the Institute went into identifying subjects, contributors and planning. The progression proposed to us has been excellent and the technical back-stopping, as always with Bayerischer Rundfunk, was admirable. Moreover, each of us has received several pounds of printed documents, and I am led to understand we shall receive more. Through these efforts this meeting has certainly reached what I would call a "critical mass" in international life and will have an impact for the future.

As to the objectives which were set up by the organizers at the beginning of the meeting, I understand that there were three: one was to help the international recognition of school radio as a field in its own right, the second one was to facilitate the exchange of experience between professionals, and the third one was to bring producers and researchers in the field of school radio closer to one another.

If I take the first objective, recognition of school radio, I think international meetings on school radio have been few and far between, and the present meeting has certainly helped radio people to come out of the shadow of the big sister television and to affirm their specific role, notwithstanding the diversity of situations and of teaching-learning strategies in which radio is involved in various European states. I would say, some kind of common collective conscience has been developed. However, with certain exceptions, the stress was put, I think, on the role of radio, either in the classroom or for the retraining of teachers, and little was finally said of its possible or its actual role in non-formal education. The sole exceptions were, I think, contributions from Denmark and Austria, which mentioned in passing the possibilities of using radio for extension work and further education. I would submit to you that in the perspective of life-long education, which is at present developing in Europe (and there were several references made to the work of the Council of Europe and UNESCO for the development of life-long education), it would be a good thing to take this into consideration in our further deliberations. In any case, this recognition of school radio is, I think, important. One participant mentioned "the lack of self-respect of the radio producer" and "his inferiority complex". This meeting may have helped to dispel that kind of attitude. Of course, the meeting also showed that the role played by radio in the educational system is not a central one. It is restricted to certain specific areas (as the old French proverb says: "Pour vivre heureux, vivons cachés!" – Let's hide and be happy).

Evidence has also been brought forward by the meeting that attempts are now being fostered in the various school radio services to develop bolder uses of radio in education and to explore new fields. There were indications of access to and participation of pupils in programmes – whether use of telephone in Swiss Radio, playing cassette recorders in schools by the BBC, or using radio services to mobilize schools for activities of national interest in Spain. Mr. Tamás Szecskö said this morning that the non-target audience in school radio could also open new fields of application of radio to education.

The second objective was to facilitate exchange of information between professionals. A strong feeling of solidarity has certainly developed in this room, and professionals have been brought closer to one another. This meeting has definitely been an interesting experiment. It was mutual teaching and self-learning at its best. As soon as the first session started you remember that we were overwhelmed with problems. All the problems came out at the same time, and definitely many of them have not been clarified. You remember the seven points of *Don Grattan*. Each of these seven points could have been, and was in fact, disaggregated into several sub-points. There were too many subjects raised at one time and considered perhaps under too many different angles. This was to be expected from the first specialized meeting on the topic in the past ten or fifteen years. Problems have developed and conditions are changing and we had to take stock of this. But if we are to have more meetings, obviously we will have to be more concentrated. Perhaps participation should be made either more homogeneous or at least carefully balanced for the purpose, for instance, of facilitating an equal dialogue between two categories of professionals or between producers and researchers and so on. This having been said, I think a vast exchange of experience actually took place here.

The third objective was bringing researchers and producers into contact. On this point, too, I have personally the feeling that excellent progress has been achieved – especially yesterday – in a field which is extremely touchy and difficult. There was strong interest, obvious curiosity for the findings of research that were brought forward. Although we have had some attitudes of rejection on principle here, I have the impression that the majority of the producers are less hostile than ever to what researchers have to say. Probably researchers have taken a line which has helped relations: perhaps they were not so arrogant as they may have sounded at times. They have wanted to be useful and have called for feedback from practitioners, which also is a rather new language. I have a feeling that this first effort at understanding one another could develop in terms of practical work, so that research could help and solve some of the difficulties of the producers quickly. There was a practical proposal that came out of one group yesterday for another meeting along these lines, and probably you may like to consider this later as an area for further exploration.

These were three objectives which were certainly, to some extent, satisfactorily reached.

I would now like to share with you my impressions about some of my findings on the meeting.

I was struck personally by the frank listing of difficulties and problems in our talks about school radio, and it would certainly deserve further collective study in one form or another. As a result of the discussion, each of us has developed his own list. In my own, I have listed for instance 1) the identification of the "difficult group" which requires a special effort in research and production, this is the 12 to 16 age group or lower secondary level, which is considered a tough nut to crack in terms of establishing some kind of fruitful education or relationship; 2) the difficulties in backstopping of teachers; 3) the growing cost of material and the need to find alternative solutions; 4) the limitation of feedback techniques; 5) the relation of school radio to parent education and its role there; 6) basic production problems such as the problem of blanks (silences) in the programmes.

But there were also some great concerns that were expressed on the general question of school radio. I have identified for myself four things that ought to be at least mentioned in any assessment: 1) The specific role and meaning of school radio; 2) the didactic nature of the school broadcast; 3) the relation of radio to other media; and 4) the future of school radio. On all four points, I think, our discussions, without reflecting a consensus, at least pointed in a common direction.

On the specific role of school radio there were two trends: On the one hand, the majority of programmes presented here, when directed to pupils, have the function of motivation and stimulation. For you, the basic quality of radio is its power of attraction. Development of creativity is its function more than the development of learning. There was little evidence given in this room of the capability of radio to systematically teach contents and facilitate learning skills. You were more interested in creativity and stimulation than in learning proper. A second trend which also struck me is that almost all communications have been stressing the importance of radio for teacher training. It would be interesting to compare the evolution in the past years of the radio programmes for students with the number of programmes for teachers. I was wondering, if radio people are not giving up trying to have a direct effect on groups and are not actually more interested in the teacher as a relais, as a transmitter, so to speak. This, of course, has implications for the very nature of radio programmes and their function in school. Perhaps the European school radio is teacher-oriented rather than learner-oriented, more than in any other region of the world. However, as Ms. *Dimény* said, the objective is to make the listener take part in the process of acquiring knowledge. This meeting of radio producers has evidenced more interest for the *process* than for the *product*. And this is, I think, a remarkable achievement. I remember the international meetings of the old days when colleagues would bring so-called "educational programmes" which were beautifully polished works, but which could only offer uncertain educational objectives. Today, we do not hesitate to present radio programmes as unfinished products, as part of something more important. A good programme is not any more a beautiful product closed upon itself, it is open-ended, it is not thought of as a work of art, even if it sometimes is. It is an instrument. The idea of the radio as a component of a learning system, playing a role in a far larger configuration of means and resources, is now gaining ground.

How far can we go in that direction? Many of you are familiar with the latest work of *Wilbur Schramm*, a well-known scholar in communications, who has tried to sum up in the book "Big Media, Little Media" the work of a lifetime devoted to media research. He says, I am quoting him by memory, but this is the exact meaning: "Research has shown that what determines the effectiveness of a medium is not its specific characteristics but the context in which it is being used and the system it is part of". This remark has far-reaching consequences. It tends, of course, to minimize the problem of the specificity of the medium, but it places it in the new light of teaching strategies. It also – and this is my third remark – places in a new light the relation between radio and television which is a question that, of course, kept popping up at every session: the big sister leading a wild life. Not that much was said about overlapping between radio and television, there was more about cooperation and organization (and also a lot of wishful thinking in some cases). The term "multi-media" in this room was meant almost all the time as a combination of radio with printed material and television, and it was practically never proposed to associate radio systematically with other audiovisual media, except for some brilliant exceptions in radiovision.

But there were some interesting examples of the relationship developed between radio and television in Belgium, which links a Monday morning school radio programme with a Sunday general public programme, or in Switzerland, which processes the soundtrack of a television programme to develop school radio programmes. But there was no comparison of effectiveness between the media, and no one was actually trying to attack this problem. This is due to the fact that cost-effectiveness research in media is hardly beginning. (In UNESCO, we have just come out with a book, which I recommend reading, on the economics of new media in education, which is the first attempt to collect all the findings available on cost-effectiveness in the use of media.) It was pointed out at this meeting, however, that the prevailing economic crisis in most European countries is certainly pressing for more practical re-distribution of responsibilities between the media than has been the case so far (perhaps also with re-distribution of functions between the school system and the media). Think again of fields like preschool education, teacher training and continuing education.

My fourth remark deals with the future of school radio. Obviously, this was the common main concern of this group. Questions were raised in plenary sessions and all group reports reflected this concern. "Is there a future for school radio?" said Don Grattan in the first session. My reaction, listening to the question, was: "As long as there is a future for education, there is a future for school radio". Clarifications on this question, which will not be answered easily, would come from an effort to re-define radio functions and its relations to new orientations in communication policies. We had a lot of extremely interesting proposals by Mr. *Boorsma* this morning on such methods as the systems approach, which can help us to appreciate the entirety of the problem.

The relation of school radio to general radio and its evolution is another important element, as is the development of media education, in which radio – and we have heard very interesting examples – has a very important role to play. Learning to listen, learning to look, development of all auditive skills, media awareness, media critical approach, were examples that we collected during the meeting. It has been especially interesting to see that in fields that could have been considered marginal in relation to media education, like the musical field or linguistic field, there were, on the contrary, a lot of indications that they were contributing basically to training for "media literacy".

I noted also another question which we have discussed neither on economic grounds nor on technical or pedagogical grounds: the possible transfer of radio broadcasts to other means of distribution like cassettes. That this problem was avoided by the meeting is an indication in itself. Another indication that I collected from your meeting is that thinking of the future of radio cannot be separated from reflections on the structure of the educational system: The search for smaller audience configurations based on smaller dimensions ("small is beautiful") is one of the new orientations for radio. By bringing radio nearer to the needs of the community, it ensures a better involvement, including financial and human involvement. A good case in point was the Ticino school radio which was an example of "small is beautiful". There was also the idea that by stressing participative procedures, school radio in the future may be more oriented towards servicing groups than towards programming for learners. There again, Mr. Boorsma reminded us that the future of radio will imply preparing for a series of decisions at marco level that goes far beyond the competence of this meeting or even of each of us as participants.

My dear colleagues: Any successful international meeting aims at its self-perpetuation, and when closing recommends that it engenders new meetings. This is part of the logic of the system. Most international organizations are reluctant to encourage this kind of institutionalizing process. We, in international organizations, – and I think I can speak for my colleagues from other international institutions in this room – prefer intensive task forces on ad hoc subjects, selected on the basis of their immediate importance, or the priority attached to them by government or professional groups, or selected because of their innovative character.

I have not in my mandate to give you advice on how to proceed from here and how to reproduce and in what form. Remember, I have been invited only to try to evaluate the present. However, I must say that I have been very impressed by the fact that music producers have met on their own and intend to cooperate further, probably on a cooperative and cost-sharing basis. I have indications also that linguists are interested in more cooperation between themselves. (A move I much welcome, as UNESCO is organizing in 1978 a large conference on teaching adults a second language, and we hope to have a large participation of broadcasting organizations). There was also a proposal which I have mentioned before to bring together again actual producers and selected users with researchers. Obviously this meeting has brought to light a large amount of questions, and each of them would probably deserve a meeting like this one, or perhaps a smaller or differently organized meeting. But the question of which organizations are willing to assume or capable of taking up the responsibility of organizing further encounters at the European or sub-European level is a point that I would leave for the discussion still to come. My final suggestion to you would be that whatever you may like to discuss today or later on this subject, the organizers of a future meeting should not ignore the fact that the initiative taken by the organizers to involve the European communities, the European Broadcasting Union and UNESCO specialists in preparing this meeting has proved useful and effective. However, I don't want to appear to preempt the future here. The future is yours.

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Appendix

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Programme *177*
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List of programmes presented *193*

Please return to:

INTERNATIONALES ZENTRALINSTITUT
FÜR DAS
JUGEND- UND BILDUNGSFERNSEHEN

Rundfunkplatz 1
D-8000 München 2
Fed. Rep. of Germany

QUESTIONNAIRE

Innovation in School Radio

From: ....
(Name and address of broadcasting station)

....

....
(Name of the person who is responsible for school radio programmes)

The purpose of this questionnaire is twofold: first, to ask you kindly to help us prepare a "European School Radio Conference" and to determine its main subjects. Second, to find out about those problem areas of school radio and those innovative approaches which are suitable for a European-wide presentation and discussion.

Please return this questionnaire by **May 19th, 1976** at the latest.

1. For which purposes do you mainly produce your school radio programmes?

☐ for the requirements of the school curricula ☐ for special training courses ☐ for education in general
☐ others: ....

2. What amount of broadcasting time (in minutes) is at the disposal of your school radio programme (monthly)?

....

3. Is it intended to extend your school radio programme? ☐ yes ☐ no
If yes, in which fields? ....

4. Is it intended to reduce your school radio programme? ☐ yes ☐ no
If yes, in which fields? ....

5. Is there in your station an integration of radio and television in the sense of a multi-media system?

☐ not yet If yes, concerning ☐ single programmes (for which subject?) ....
☐ programme series (for which subject?) ....
☐ the total school programme offer ....

6. On which fields, do you think, should the planning of school radio programmes concentrate in future?

....

....

....

7. Where are the principal problems in your work to be found? in

☐ planning (which?) ....

☐ production (which?) ....

☐ administration (which? e.g. obligatory cooperation with the educational administration, financing etc.)

....

☐ other fields (which? e.g. employment of qualified staff, cooperation with publishing houses, etc.)

....

8. How much information do you have on the state of school radio in the European countries? Are you

☐ well informed? ☐ poorly informed? ☐ not informed at all?

About which countries would you like to get more detailed information?

....

9. Are you interested in psychological or socio-psychological problems with regard to your audience (e.g. development of comprehension, attention patterns, perception, etc.)? ☐ yes ☐ no

If yes, which?

....

....

In reviewing the many activities within school radio at your station, what do you consider to be a good example of an innovative programme in terms of approach, contents and methods?

....

(Name of the programme)

We ask you to provide us with detailed information on the programme you have selected:

10. Would you be willing to present this innovative programme at the "European School Radio Conference" and to discuss it with the participants? ☐ yes ☐ no

11. Is it a single programme or a programme series? a) ☐ single programme b) ☐ programme series

b) Of how many single units does the series consist? ....

12. How long (in minutes) is the programme? ....

13. Is the programme produced as part of the school curriculum? ☐ yes ☐ no

14. What is the programme's methodological intention? Is it an enrichment programme or a direct teaching programme?

☐ enrichment programme ☐ direct teaching programme ☐ partly enrichment, partly direct teaching

15. For which school subject is the programme conceived?

☐ social sciences ☐ physics/chemistry ☐ geography ☐ foreign language

☐ biology ☐ mathematics/arithmetic ☐ history ☐ native language

☐ music ☐ road safety campaign ☐ art ☐ religion

☐ other: ....

If the programme is cross-cutting through several school subjects, please mark all subjects which it is part of.

16. For which age group is the programme conceived (target group)?

....

17. Do you provide accompanying written material for the pupils? ☐ yes ☐ no

18. Is the radio programme supplemented by material presented on other media? ☐ no

☐ film super 8 ☐ film strips ☐ slide sets ☐ other: ....

19. What role does the teacher assume in relation to the radio programme? Please give a short description:

....

....

....

....

20. Do you provide written information or do you broadcast information for the teachers how to use the programme in class?

☐ written information ☐ broadcast information ☐ both ☐ no information at all

21. Is this information ☐ primarily formal information about the programme?

☐ primarily information on the contents of the programme? and/or

☐ didactical/methodological advice to prepare for and use the programme?

22. What other aspects concerning approach, contents and methods of the programme not touched in the previous questions would you consider to be important for understanding your school programme? Please give a short description:

....

....

....

....

....

....

(Date) (Signature)

When returning the questionnaire please enclose information concerning your school radio programme as a whole and the above described programme in particular.

Thank you very much for your cooperation.

INT. ZENTRALINSTITUT FÜR DAS
JUGEND- U. BILDUNGSFERNSEHEN

EUROPEAN SCHOOL RADIO CONFERENCE

October 12 to 14, 1977

at Bayerischer Rundfunk, Rundfunkplatz 1, 8 Munich 2,
'Großer Sitzungssaal' (main conference hall)

Organized by the Internationales Zentralinstitut für das Jugend- und Bildungsfernsehen, IZI, Munich

PROGRAMME

Int. Zentralinstitut für das
Jugend- u. Bildungsfernsehen
Rundfunkplatz 1
D-8000 München 2

Tel.: Munich (089)
5900-2140

Telex: 529831 brmd

Director: Prof.Dr. Hertha Sturm
Managing Director: Paul Löhr

Wednesday, October 12, 1977

9.00 Plenary session

Welcome address

Albert SCHARF, Deputy Director General and
Legal Adviser of Bayerischer Rundfunk

9.15 Opening of the conference

Prof. Dr. Hertha STURM
Paul LÖHR
Internationales Zentralinstitut für das
Jugend- und Bildungsfernsehen

9.30 Panel discussion on

SCHOOL RADIO IN EUROPE - conceptions, procedures of implementation, trends

Chairperson: Donald GRATTAN, BBC, Great Britain

Participants: Dr. Charles ARMOUR, BBC, Great Britain
Janez DOKLER, JRT, Yugoslavia
Harald ENGBERG-PEDERSEN, DR, Denmark
Arlette GRANDMAITRE, CNDP, France
Dr. Klaus KLÖCKNER, ARD/HR, Federal Republic of Germany
Bram KRUIKEMEIJER, NCRV, Netherlands
Stelios SYCALLIDES, Ministry of Education, Cyprus

11.00 Coffee break

11.15 Plenary discussion

12.30 Lunch

14.15 Plenary session on

THE SUBJECT 'MUSIC' IN SCHOOL RADIO

Chairperson: Dietrich v. BAUSZNERN, Hochschule für Musik und Darstellende Kunst, Frankfurt/Main

Judit DIMENY, Magyar Radio, Budapest:

Music education in school radio

15.15 Presentation of selected programme examples of the school radio departments in Hungary (MRT), Federal Republic of Germany (ARD/BR), Norway (NRK), Belgium (RTB)

16.15 Coffee break

16.30 Continuation of the presentation of selected programme examples

17.15 Plenary discussion

18.30 Reception given by the Director General of Bayerischer Rundfunk in the Broadcasting House, 1st floor.

Thursday, October 13, 1977

9.00 Plenary session on

PERCEPTION AND ATTENTION WHILE LISTENING TO RADIO PROGRAMMES

Chairperson: Dr. Marianne GREWE-PARTSCH, IZI

Dr. Sabine JÖRG, IZI:

Problems of perception and attention: The present status of research

9.45 Prof. Dr. Hertha STURM, IZI:

Problems of perception and attention: Consequences for the practice of school radio

10.30 Coffee break

10.45 Discussion in working groups

12.00 Lunch

14.00 Report of the working groups to the plenum

14.45 Plenary session on

FOREIGN LANGUAGE TEACHING IN SCHOOL RADIO

Chairperson: Meri RIUTTU, YLE, Finland

Prof. Dr. Carel van PARREREN, University of Utrecht:

Research findings in foreign language teaching and their relevance for school radio

15.00 Presentation of selected programme examples of the school radio departments in Finland (YLE), Great Britain (BBC), Switzerland (TSI), Sweden (SR)

16.30 Coffee break

16.45 Discussion in working groups

18.00 Report of the working groups to the plenum

Friday, October 14, 1977

9.00 Plenary session on
SCHOOL RADIO AND FEEDBACK

Chairperson: Rolf LUNDGREN, SR, Sweden

Dr. Tamás SZECSKÖ, Magyar Radio, Budapest:

Results of audience surveys carried through in various European countries - A comparison

9.45 Dr. Jan Peter BOORSMA, University of Amsterdam:

An approach to qualitative school radio research

10.15 Coffee break

10.30 Henri DIEUZEIDE, UNESCO, Paris:

Evaluation of the conference

11.00 Final plenary discussion

12.00 Closing address of the organizer

Paul LÖHR, IZI

12.15 Farewell cocktail given by the Director of Radio of Bayerischer Rundfunk in the Broadcasting House, 1st floor.

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EUROPÄISCHE SCHULFUNK-KONFERENZ

München, 12. - 14. Oktober 1977

EUROPEAN SCHOOL RADIO CONFERENCE

Munich, October 12 - 14, 1977

CONFERENCE EUROPEENNE DE LA RADIO SCOLAIRE

Munich, du 12 au 14 octobre 1977

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EUROPÄISCHE SCHULFUNK-KONFERENZ

München, 12. - 14. Oktober 1977

EUROPEAN SCHOOL RADIO CONFERENCE

Munich, October 12 to 14, 1977

CONFERENCE EUROPEENNE DE LA RADIO SCOLAIRE

Munich, du 12 au 14 octobre 1977

LISTE DER VORGEFÜHRTEN PROGRAMME

LIST OF THE PROGRAMMES PRESENTED

LISTE DES PROGRAMMES PRESENTES

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Rundfunkplatz 1
D-8000 München 2

Tel.: Munich (089)
59002140

Telex: 529831 brmd

BAYERISCHER RUNDFUNK

Rundfunkplatz 1
D-8000 München 2
Federal Republic of Germany

Title: DAS SOLL MUSIK SEIN?
Series: Daten und Argumente (10 programmes)
Length: 30 minutes
Broadcasting year: 1971/72, 72/73, 73/74, 74/75 (with repeats)
Target group/intention: from the 7th grade onwards for all types of schools

Title: KLAVIER ZU VIER HÄNDEN: MOZART UND STRAWINSKY
Series: Musik unter der Lupe (10 programmes)
Length: 30 minutes
Broadcasting year: 1975/76, 76/77 (with repeats)
Target group/intention: from the 7th grade onwards for all types of schools

Series: HÖREN LERNEN (32 programmes)
Presented: programme no. 18
Length: 15 minutes
Broadcasting year: 1970/71
Target group/intention: beginners

Title: SCHWINGENDE STÄBE
Series: Zehn Minuten Musik (17 programmes)
Length: 10 minutes
Broadcasting year: 1976/77, 77/78 (with repeats)
Target group/intention: from the 5th grade onwards for all types of schools

Title: ZUM 80. GEBURTSTAG CARL ORFFS
Series: Die Information (themes of topical interest when they occur)
Length: 15 minutes
Broadcasting year: 1975
Target group/intention: all types of schools

BRITISH BROADCASTING CORPORATION

Broadcasting House
London W1A 1AA
Great Britain

Title: CONTRASTES
Series: La France Aujourd'hui (20 programmes)
Length: 15 minutes
Broadcasting year: 1970
Target group/intention: French language and culture for the intermediate level

Title: VAN GOGH
Series: Voix de France - French VI (20 programmes)
Length: 20 minutes
Broadcasting year: 1969
Target group/intention: French for advanced students (6th grade)

Title: DIE MOSEL ENTLANG
Series: Da sind wir wieder (20 programmes)
Length: 15 minutes
Broadcasting year: 1975
Target group/intention: German for students of the intermediate level

Title: LA BELLE EPOQUE
Series: Voix de France - French VI (20 programmes)
Length: 20 minutes
Broadcasting year: 1973
Target group/intention: A picture of life in France around 1900, for advanced students

Title: BERLIN
Series: Deutsch für die Oberstufe (20 programmes)
Length: 20 minutes
Broadcasting year: 1976
Target group/intention: German for advanced students

Title: VIVRE A PARIS
Series: La Parole aux Jeunes - French III (10 programmes)
Length: 10 minutes
Broadcasting year: 1975
Target group/intention: French for students of the intermediate level

MAGYAR RADIO ES TELEVIZIO
Bródy Sándor U. 5-7
H-1800 Budapest
Hungary

Series: MUSIC LESSON (30 programmes for each grade)
Presented: programmes no. 11, 12 and 14
Length: 10 minutes, 15 minutes
Broadcasting year: from 1972/73 yearly until 1977/78
Target group/intention: 1st, 2nd, 3rd and 4th grade

Title: AT WHAT TIMBRE?
Series: Sound game (35 programmes)
Length: 20 minutes
Broadcasting year: from 1973 yearly until 1977/78
Target group/intention: 8 to 10 year old students of the primary level

Title: IN THE DARK
Series: Sound game (35 programmes)
Length: 20 minutes
Broadcasting year: from 1973 yearly until 1977/78
Target group/intention: 8 to 10 year old students of the primary level

Title: JUMPING AND WINDING
Series: Sound game (35 programmes)
Length: 20 minutes
Broadcasting year: from 1973 yearly until 1977/78
Target group/intention: 8 to 10 year old students of the primary level

Title: FROM DARK TO LIGHT

Series: Sound game (35 programmes)

Length: 20 minutes

Broadcasting year: from 1973 until 1977/78

Target group/intention: 8 to 10 year old students of the primary level

NORSK RIKSKRINGKASTING

Bjørnstjerne Bjørnsons Plass 1
Oslo 3
Norway

Series: PLAY OF COLOURS (4 programmes)

Presented: programme no. 4

Length: 20 minutes

Broadcasting year: 1976

Target group/intention: 7 to 10 year old students of the primary level

RADIODIFFUSION-TELEVISION BELGE

Cité de la Radio-Télévision
Boulevard Auguste Reyers 52
B-1040 Bruxelles
Belgium

Title: LE ROLE DU CHEF D'ORCHESTRE

Series: Musique (8 programmes a year)

Length: 30 minutes

Broadcasting year: 1977

Target group/intention: 15 to 18 year old students of the upper secondary level

RADIOTELEVISIONE DELLA SVIZZERA ITALIANA

Casella postale
CH-6903 Lugano
Switzerland

Title: LA BATAILLE DE HASTINGS

Series: Die großen Schlachten der Vergangenheit (13 programmes)

Length: approx.50 minutes

Broadcasting year: 1975/76

Target group/intention: French for students of the intermediate and upper secondary level

SVERIGES RADIO

Oxenstiernsgatan 20
S-10510 Stockholm
Sweden

Series: SWITCH ON (60 programmes)

Presented: excerpts from several programmes

Length: 10 minutes

Broadcasting year: from 1972 onwards (with repeats)

Target group/intention: English course for beginners, 3rd grade of comprehensive schools

OY. YLEISRADIO

Kesäkatu 2
SF-00251 Helsinki
Finland

Title: HEAR HERE, FAIR HARE!

Series: It makes sense (5 programmes)

Length: 11 minutes

Broadcasting year: 1977

Target group/intention: English course for beginners, 3rd and 4th grade of comprehensive schools

Title: SEPARATED BY A COMMON LANGUAGE

Series: Learn to listen (15 programmes)

Length: 14 minutes

Broadcasting year: 1976

Target group/intention: English for students of the last grade of comprehensive schools and of the lower secondary level